17:24:41 OCA PAD AMENDMENT - PROJECT HEADER INFORMATION 03/11/91

Active

Project #: M-22-603
Center # : 10/24-6-Q5638-0A0
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Rev #: 1
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Work type : RES
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Contract entity: GIT

Contract#: FIXED PRICE AGREEMENT
Mod #:
Prime #:

Subprojects ? : N
Main project #:

Project unit: SCH MGMT Unit code: 02.010.181
Project director(s):
ALLVINE F C SCH MGMT (404)894-4356

Sponsor/division names: BELLSOUTH ENTERPRISES /
Sponsor/division codes: 251 / 004

Award period: 910101 to 911231 (performance) 911231 (reports)

Sponsor amount	New this change	Total to date
Contract value	0.00	25,000.00
Funded	0.00	25,000.00
Cost sharing amount		0.00

Does subcontracting plan apply ?: N

Title: STOCK MARKET PROJECT

PROJECT ADMINISTRATION DATA

OCA contact: Don S. Hasty 894-4820

Sponsor technical contact

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Sponsor issuing office

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BELLSOUTH CORPORATION
1155 PEACHTREE ST., NE, #14K10
ATLANTA, GA 30367

Security class (U,C,S,TS) : U
ONR resident rep. is ACO (Y/N): N
Defense priority rating : N/A
N/A supplemental sheet
Equipment title vests with: Sponsor GIT X
FIXED PRICE AGREEMENT SILENT ON TITLE TO EQUIPMENT.
Administrative comments -
ISSUED TO INCORPORATE BUDGET REVISION, VIA MEMO DATED 3/6/91, SHIFTING FUNDS BETWEEN BUDGET CATEGORIES.

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GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION

NOTICE OF PROJECT CLOSEOUT

Closeout Notice Date 08/26/92

Project No. M-22-603 Center No. 10/24-6-Q5638-0A0

Project Director ALLVINE F C School/Lab SCH MGMT

Sponsor BELLSOUTH ENTERPRISES/

Contract/Grant No. FIXED PRICE AGREEMENT Contract Entity GIT

Prime Contract No.

Title STOCK MARKET PROJECT

Effective Completion Date 911231 (Performance) 911231 (Reports)

Closeout Actions Required:	Y/N	Date Submitted
Final Invoice or Copy of Final Invoice	Y	
Final Report of Inventions and/or Subcontracts	N	
Government Property Inventory & Related Certificate	N	
Classified Material Certificate	N	
Release and Assignment	N	
Other	N	

Comments

Subproject Under Main Project No.

Continues Project No.

Distribution Required:

Project Director	Y
Administrative Network Representative	Y
GTRI Accounting/Grants and Contracts	Y
Procurement/Supply Services	Y
Research Property Managment	Y
Research Security Services	N
Reports Coordinator (OCA)	Y
GTRC	N
Project File	Y
Other	N
	N

M-22-623

MARKET COMMENTARY, Stock Market Project, College of Management, Georgia Institute of Technology January 7, 1991 by Professor Fred Allvine

Model Results

1. Valuation Model A Suggests Market Slightly Overvalued While Valuation Models B and C Indicate Market Undervalued (see models pp. A1-3). New Valuation C Model Added This Week (see cover & p. A3).
2. Longer Term Daily And Weekly Models Are Strong And Recommend A Heavy Commitment To Equities (see models on pp. C1-5 & A5-8). Daily Asset Allocation Models Performed Very Well During 1990 Moving Out And Back Into Market At Seemingly Good Times.
3. Short Term Outlook Poor Last Week, But Somewhat Improving This Week (see models pp. C6-C9).
4. Special Charts: Price Patterns & Channels - Remain Quite Weak, While Causal Models Improving (pp. S1-7).
5. Special Study: *Phase Of Presidential Election Cycle Very Strong* (pp. S8-10)

Long Term Outlook Further Improved This Week, And Is Strong.
Short Term Outlook Is Poor: Technical Models Weak While Causal Models Improving
We Expect Market To Remain Unsettled Until Persian Gulf Crisis Is Resolved.

Longer Term Models Bullish

The longer term weekly models are very strong, and that is why they were include on the cover of this week's report. The models suggest that a major market advance is likely, and the portfolio strategies recommend holding a high level of equities.

Phase Of P.E. Term Also Bullish

Our research leads us to the conclusion that the stock market is strongly influenced by the Four Year Presidential Term. A high performing and reliable investment strategy from 1961 through 1984 was to emphasize cash over the 1.75 years following the Presidential Election (i.e. be conservative), and then to increase equity exposure over the 2.25 years prior to the next P.E. Unfortunately, this strategy performed poorly over the 4 Year P. E. Term from 1985-1988. The first two years after the 84 election (85 &86) the stock market rapidly advanced, while theory suggested it should have fallen. We believe there were some special circumstances operating at that time to cause the market to surge ahead (our causal models, however, were very strong during 85,86, & early 87).

The logic behind the P.E. stock market cycle is that an Administration tends to concentrate its "economic pain and suffering" (i.e. slow the pace of the economy and bring down inflation) during the first 2 years following the P.E., and then endeavors to stimulate the economy to have it expanding over the two years leading up to the next P.E. According to Political Scientist, managing the economy in this manner enhances the likelihood of the incumbent party and the President (if he is standing for re-election) maintaining control over the White House. Two weeks ago we reviewed the data showing that the 1.5-1.75 years after the P.E. tends to be poor for stocks which is the period we just passed through (with exception of 85&86). Last week, we presented data showing that the 12 month period running from the 4th quarter of the 2nd year after the P.E. (starting this past October) and continuing through the 3rd quarter of the 3rd year after the P.E. (end of Sept. 91) tends to be very bullish for the stock market.

This week data is presented that covers the entire four year election term over the 30 year period from 1961 through 1990. As can be observed from the chart covering the entire four year P.E. term (see p. S9), the S&P 500 (not including dividends) tends to fall sharply starting the 2nd half of the year following the P.E. Over the entire first year the average gain in the S&P 500 is only 2 percent. Stock prices then fall sharply through the first 3 quarters of the 2nd year following the P.E., and over the entire year 2nd year the stock market declines on average by 2.5 percent. The chart then shows that the greatest annual gain over the four year period is 1.75-2.75 after the Presidential Election (i.e. Oct. 90-Sept.91). Furthermore, the chart shows that the annual rate of return falls sharply from the 4th quarter of the 3rd year through the 1st quarter of the 4th year as the economy starts to expand and interest rates begin to increase. The last nine months for the election year is very good, and over the entire 4th year the stock market increases 14 percent.

We also analyzed the 4 Year P.E. Stock Market Cycle excluding the unusual 4 year term from 85-88. As can be observed from the chart (see p. S9), the major difference in stock price change is the steady decrease over the 1.75 years after the P.E. Over the remaining 2.25 years stock price change is similar to the first analysis. The 3rd special chart shows what happens to the yield of the 30 year bond over the 4 year P.E. term. As can be observed (see p. S10), interest rates tend to rise sharply over the 1.75 years after the P.E. when inflation is increasing and the Fed is tightening. From the 4th quarter of the 2nd year after the P.E. through the 3rd quarter of the 3rd year (Oct. 90-Sept.91), bond yields fall and bond and stock prices rise as the Fed succeeds in slowing the economy and bringing down the inflation rate. Interest rates fell sharply during the final quarter of last year (2nd year after P.E.) just as the Presidential Election Stock Market Cycle would suggest.

MARKET COMMENTARY, Stock Market Project, College of Management, Georgia Institute of Technology January 14, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models Have Split Readings - 2 Strongly Positive and 2 Slightly Negative (see pp 1-4).
2. Longer Term Liquidity Models Are Strong, But Some Down Slightly This Week (see pp. 5-14).
3. Short Term Models Poor For 3-4 Weeks & Signaled In Advance Market Decline (see p. S1-11).
4. Short Term Divergence Model Strong & Suggests Negative Psychology Hurting Market (p. S12).
5. Special Study: Phase Of Presidential Election Cycle Very Strong (1-6).

Long Term Outlook Remains Cautiously Bullish, While Short Term Outlook Is Weak.

Uncertainties Surrounding Persian Gulf Crisis Continues To Depress Stock Prices.

Our Longer Term Outlook Remains Positive, While Others Are Bearish

Barron's: The outlook of the editor and financial analysts presented in Barron's prior to Christmas, prior to New Years, and again this week was quite Bearish. Editor Abelson believes that the market will likely advance when there is a favorable settlement of the Persian Gulf Crisis, but then it will head sharply lower. We agree that the market is likely to rapidly advance if the Middle East situation is positively resolved, but then continue on an upward course through the next Presidential Election in Nov. 1992.

Why Some Bearish: The bearish outlook that many hold regarding the market is associated with the distressingly weak condition of many of our major financial institutions. There is a fear that the excesses of the past eight years (i.e. real estate - structures and costly privatizing of some firms) is going to weigh heavily on the economy and stock market for some time to come. Clearly, there are some enormous financial problems that have to be resolved over the next few years. However, we believe that there is a high probability of the U.S. avoiding a major financial melt-down, and for the economy to bounce back next spring.

Why Are We Cautiously Optimistic: There are several reasons why we remain cautiously optimistic (certainly the U.S. has some serious problems that have to be corrected) regarding the outlook for the economy and stock market over 1991 and 1992. 1. The Soft Landing (discussed for two years) has had the beneficial result of slowing the economy and inflationary pressures. As a consequence, the Fed is not pursuing a course of "slaying inflation" like it did long into the serious energy related recessions of 1973-74 and 1981-82. We had extremely good news this past week that the Producer Price Index (finished goods) was down in December, and the price news was also good for "intermediate" and "crude" categories of producer goods. The P.P. Index is a leading indicator of consumer prices, and suggests that the C.P.I. is headed lower to the 3-4 percent level later this year. Good inflation news (not deflation) is very positive for the stock market. 2. The Fed is loosening and the *triple action* of lowering the reserve requirement, discount rate, and Fed Funds is bullish. and we expect more good news to be forthcoming. 3. Because of positive Fed action, our liquidity models have become quite strong over the past 4 weeks signaling the likelihood that the market could sharply advance once the Persian Gulf Crisis is resolved. 4. Given the huge Federal budget deficit hanging over the economy and the brittle nature of our financial system, the Fed is going to do everything in its power to turn around the economy as soon as possible so as not to increase the probability of the economy collapsing. The pessimists believe that things are different this time, and that positive Fed action will not stimulate and turn around the economy as in the past - we disagree. 5. We are in the most bullish phase of the 4 year

Presidential Election-Stock Market Cycle, and believe the Fed has a good chance to now (with inflation under control) stimulate the economy and keep it and the stock market expanding through the 1992 P. E. year.

P.E.-Stock Market Cycle: This week we have the final installment regarding our interpretation of the 4 Year Presidential Election - Stock Market Cycle. Last week, we discussed the annual rate of change in stock prices and the 30 year bond yield over the 4 year P.E. term. This week we indexed the data over the four year terms to give another perspective of what happens. The results presented are for the 6 election terms from 1961-1984 (85-88 is excluded since we believe there were extenuating circumstances operating at that time). The first chart shows that the market generally climbs 15 percent from the 4th qtr. of the 2nd year after the P.E. through the 2nd qtr. of the 3rd year. We are now 1/3 through this historically bullish period for the stock market. Furthermore, over the 2.25 years through the election year the market gains on average 35 percent. Chart 2 shows how the yield on the 30 year bond climbs over the first 1.75 years after the election (when inflation is a problem), and then heads downward for almost three quarters as the stock market lurches forward. The chart on page 3 shows that the Fed Fund rate increases over the 1.75 years after the P.E. as the Fed tightens to slow the economy (Fed started a year earlier than usual in this regard). The movement of the discount rate (shown on page 4) is similar to the movement of the Fed Funds rate and yield on the 30 year treasury bond. The last 2 charts shows the summary results of what happens to the price earnings ratio and dividend yield over the 4 year Pres. Elec. term. The price earnings ratio drops by 33% and the dividend yield increases by 28 percent over the 1.75 years after the Pres. Elec. (see pp. 5-6).

Will History Repeat Itself: The question remains whether history will repeat itself with the market substantially increasing over the next two years. Obviously, strong historical relationship are periodically disturbed when significant new developments occur. War and financial excess could change the situation this time, and this is the reason that we remain "cautiously" optimistic regarding the outlook for the market in 91 and 92. Politicians will be politicians, and if there is any possibility, the Administration (with the help of the Fed), is going to turn around the economy as soon as possible, and have it expanding over most of the two years before the next Presidential Election in Nov. 1992. Critical "swing voters" respond to their feeling about the health of the economy, and that is why the economy and stock market are normally advancing over the two year period before the Pres. Elec.

Chart Reorganization

We reorganized the chart presentation this week to make the charts more easy to interpret. Over the past year, we have substantially increased the number of models to cover the short, intermediate, and long time horizons (i.e. short = a few weeks to a few months or quarters, intermediate = 1-2 years, and long = 3-4 years). In addition, we have moved from primarily presenting liquidity models to also having valuation models (relationship between key market instruments) and technical models (measure turning in trend and continuation of trend). We believe the benefits outweigh the added complexity associated with the larger numbers of models now presented.

One big change was to combine and separate the presentation of 12 short term models. Our studies show that the market often makes 2-3 significant moves a year, and the short term models are designed to forecast such moves. The short term models are useful in deciding when to commitment more funds to equities, and they can also be employed to enhance returns with a number of futures and options strategies. In addition, the short term models are helpful in determining when the major trend is moving ahead.

Our studies show that short term market movements (like those which occurred in May-Oct. and Oct-Jan.) often start when the short term causal models advance and the technical models are rapidly improving. The reverse conditions (falling causal and technical models) normally happen when the market contracts. The short term models can be skipped if one is primarily interested in the results of the longer time horizon models.

MARKET COMMENTARY, Stock Market Project, College of Management, Georgia Institute of Technology January 21, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models Continue to Present Split Readings - 2 Strongly Positive & 2 Slightly Negative (pp. 1-4).
2. Longer Term Liquidity Models Continue To Be Fairly Strong & Recommend Holding A High Level Of Equities In Portfolios (see pp. 5-14). The Fed continues to ease & the reserve models are strong (pp 5, 10,11).
3. Short Term Models After Being Poor For 3-4 Weeks (and signaling the rapid market decline) Have Bottomed, But It Is Too Early To Determine Whether The Short Term Advance Is Likely To Continue (see p. S1-11).
4. Short Term Divergence Model After Suggesting Good Buying Opportunity (before market advance) Is Now Very Negative - "1" on a 100 scale (p. S12).
5. Special Study: Change In Interest Rates Last 4 Years & Chart Of C.P.I. & P.P.I. (1-3).
6. Divergence Model Has Done A Good Job Of Signaling Short Term Market Advances (see cover).

Long Term Outlook Continues "Cautiously" Bullish, While Short Term Outlook Is Uncertain.

Both Long & Short Term Outlooks Depend On Positive Resolution of Persian Gulf Crisis.

Greenspan States Near Bottom Of Slide

This past week, the Chairman of the Federal Reserve suggested the economy may be approaching the end of its' slide. However, retail sales figures and production figures suggest that the economy is still falling, and that the bottom is not yet in sight. The contraction of employment seems to be continuing with more firms announcing lay-offs than others firms are adding new workers. Consumer psychology remains quite negative given the recession, heavy consumer debt load, and the war. It is going to take some time to turn around the consumer sector of the economy, and a quick and positive conclusion to the Persian Gulf War would be a positive development.

Fed To Ease Further: Over the last year (since the Soft Landing Program started to slow the pace of the economy and inflation), the Fed has eased several times - first gradually and then more rapidly. This week we review the changes in interest rates over the last 4 years to see what might be expected to happen, if the recent past is any indication of the future. Four short term interest rates are plotted from the beginning of 1987 to the present in the special chart on page 1. While the Fed Funds rate has fallen close to its level at the beginning of 87, the 3 mon. T-Bill and Discount Rate are still 100 basis points higher and the prime rate is 200 basis points higher than in early 87. This suggests that the Fed has room to lower rates further to stimulate the economy. The 2nd special charts shows two short term rates (Fed Funds & T-Bill) and the rate of the 7 year T-Note and 30 year T-Bond. As was true of the 3 mon. T-Bill and Discount Rate, the yields of the 7 year note and 30 year bond are still 100 basis points higher than they were at the beginning of 87. As the economy slows and inflation contracts, we expect both short and long term rates to fall further.

Short War Good For Market

The initial response of the world's financial markets was very positive regarding how the war was progressing. Over the first two days, it appeared that the Allied Forces were going to force Iraq to make a quick withdrawal from Kuwait. Experiencing little initial resistance, the outlook was a fast end to the war. However, with new concerns over the missile capability of Iran and the possibility that Saddam may be holding back forces, the negative implications of a longer war are commencing to hurt the financial markets. It is estimated that the Persian Gulf War is costing the U.S. close to .5 billion dollars a day. Given the already swollen Federal budget deficit, the prospect of a long and costly war is not good for the U.S. and the world's economy. We expect a great deal of market volatility until it is clear that the Allied Forces are winning the war, and that the major military involvement will be short in nature - 2 to 3 months.

Inflation News

One of the most important influences on the stock market is the outlook for inflation. Consumer and producer prices have been gradually increasing over the past four years, and higher prices have become a serious concern to the financial markets. As can be observed from the special chart on page 3, the rapid decline in inflation from 1981 to 1987 was very beneficial to the stock market. Earnings growth from late 87 to late 89 helped the stock market climb to new highs. However, the increase of inflation in 1990 to its highest levels since 1981 (not unusual for the 2nd year following the P.E.) has driven stock prices down from their recent highs. Both consumer and producer prices (shown on an annual basis) reached their highest levels in November and were both down in December. Unfortunately, the core rate of the C.P.I. was up to .4% in Dec., after having fallen to .3% over the prior two months. In contrast, the core rate of of the P.P.I. has steadily declined over the past 12 months. Since inflation lags behind the slowdown of the economy, the expectation is for inflation to continue to slowly decline throughout 1991 (possibly to fall to from 4-4.5% by the end of 91) unless the war drags-on. Additionally, producer prices tend to lead consumer prices, and the progress being made in the producer sector should help to bring down consumer prices.

MARKET COMMENTARY, Stock Market Project, College of Management, Georgia Institute of Technology January 28, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models - 2 Strongly Positive, 1 Slightly Negative, 1 Slightly Negative & Improving (pp. 1-4).
2. Longer Term Liquidity Models Continue To Be Fairly Strong: Daily Models Range From 81-89 (p. 5) & Weekly From 79-92 (p. 7). Long Term High Performance Sequential Combination Model (p.8) Also Bullish.
3. Daily and Weekly Portfolio Strategies All Recommend Holding A High Level Of Equities (pp. 6&7).
4. The 50 Series Intermediate Horizon Models Are Fairly Strong & Recommend A Heavy Exposure To Equities.
5. The Fed Continues To Ease & The Reserve Models Continue Fairly Strong (pp 7, 10,11).
6. Short Term Technical & Causal Models Have Become Quite Positive Over Past Two Weeks (see p. S1-11).
7. Divergence Model Is Weak (given rapid market turnaround) & Would Be A Reason For Concern Were It Not For The Causal Model Being Strong (p. S12).
8. Special Study: 4 Year Election Term & Stock And Bond Prices (1-4)

Long, Intermediate, And Short Term Models Are All (cautiously) Bullish.

Caution Is Advised Due To A Large No. Of Uncertainties That Could Alter The Outlook Were They To Worsen.

Case For Continuing Market Advance

Reasons for Optimism: We have repeatedly stated that based on our analysis the market likely bottomed in October last year (see chart p. S1). There are three primary reasons for the continuing strength of the stock market. 1. The Soft Landing Program ("get tough phase" from Mar. 88 - Mar 89) slowed the growth of the economy and *lowered the rate of inflation* (outlook very good for remainder of year). 2. We are in the *bullish phase of the 4 year Presidential Election Term*, and the Administration will try hard to have the economy in an upturn as soon as possible. 3. *Recession expected to be relatively mild* and of average (11 months) or shorter than average duration (supported by the less than expected decline in 4th qtr. GNP reported last Friday). 4. The *Persian Gulf War is also going to be relatively short* with the major military action over in a few months. Finally, the positive qualitative factors are supported by a large set of relatively strong long and intermediate term monetary (liquidity) models, valuation models, and technical models.

Reasons for Pessimism: On the other hand, there are a number of negatives that the market pessimists stress that cannot be ignored. 1. One major concern is that our financial structure is very weak and vulnerable (tied into real estate excesses) and that it will take some time to correct the problems that exist and that the economy is not going to get off unscathed. 2. The recession is going to be severe (in part because of no. 1) and it will be a long time before the economy turns around, and this will depress stock prices. 3. We have underestimated the length and the cost of the Persian Gulf War and the war effort is going to act as a serious drag on the economy and financial markets. Clearly, if the financial system, recession, or war create more serious problems than presently seems to be the case, the financial markets could come under considerable pressure.

War Progressing Reasonably Well

While the Persian Gulf War is not yet two weeks old, the war news remains relatively positive. Loss of allied forces and equipment has been relatively low. Iraq has been unable to present a significant defense - the air force is defecting or grounded and the use of missiles has been largely ineffective. There is the belief that the worst part of the war may be over by mid-March. Countries committed tens of billions of dollars this past week to helping the U.S. pay for the war. Stabilizing the Persian Gulf could have some positive long term benefits to the rest of the world. Some military experts believe that once the Persian Gulf Crisis is positively settled that we could experience a long period of relative peace in the world that would contribute to a stronger world economy.

Presidential Election - Financial Cycle

Stock Market: We have done extensive research on the 4 year Pres. Elect. term, and believe that there is strong logic supporting the advance of the stock market over the 2.25 years prior to the next P.E. The tightness of fit of this phenomena can be observed from the chart on page 1. Obviously, the four year pattern of first decline and then advance does not always occur as was demonstrated from 85-88. The challenge is to determine when it is likely to happen and when it will not occur (done with the monetary, value, and technical market models). As a result of the Soft Landing Program, the stock market did not advance rapidly in 1988 as would have been expected. Instead the market peaked 1-1.5 years later from late 89 (small stocks) to mid 90 (high cap stocks). We believe that the S&P 500 could advance from its October 1990 low of 300 by 20 to 30 percent to between 360 and 390 over the next two years if inflation falls, the recession is mild, and the models remain strong.

Interest Rates: Given that Fed policy has a great deal to do with creating the observed four year stock market cycle, one would also expect to observe a systematic change in interest rates over the four year election term. As can be seen from the charts showing the 3m T-Bill, Fed Funds rate, Discount Rate, and 30 Year Bond (pp. 2-5), interest rates tend to increase over the first 1.5 years after the P.E., decline for around one year (1.5-2.5 after P.E.), then increase rather slowing for a year (2.5-3.5 after P.E.), and the decline for 6 months (6 months prior to election). Interest rates (particularly short term) have fallen sharply over the past 6 months and could continue to slide for a few more months in accordance to the observed pattern of change. However, given the huge Federal budget deficit and the demand for funds in Eastern Europe and Japan, we expect rates to start increasing once the economy bottoms and beginning to advance.

MARKET COMMENTARY, Stock Market Project, College of Management, Georgia Institute of Technology February 3, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models - 2 Strongly Positive, 1 Positive, 1 Slightly Negative (pp. 1-4).
2. Longer Term Liquidity Models Continue To Be Fairly Strong: Daily Models Range From 83-88 (p. 5) & Weekly From 78-92 (p. 7). Long Term High Performance Sequential Combination Model (p.8) Also Bullish.
3. Daily & Weekly Portfolio Strategies All Recommend Holding A High Level Of Equities - 95-100% (pp. 6&7).
4. The 50 Series Intermediate Horizon Models Are Fairly Strong & Recommend A Heavy Exposure To Equities.
5. The Fed Continues To Ease & The Reserve Models Continue Fairly Strong (pp 7, 10,11).
6. Short Term Technical & Causal Models Have Been Quite Positive Over Past Three Weeks (see p. S1-11).
7. Divergence Model Is Weak (given rapid market turnaround), But Offset By Strong Causal Model (p. S12).
8. Special Study: a. Interest Rates Continue Expected Fall (1), b. Discount Rate Cut Extremely Bullish (2-3), c. Evaluation Of Current Market Level (4-6)

Long, Intermediate, And Short Term Models Are All (cautiously) Bullish.

Bull Market Continues: Many Bears Capitulate

The cover of the Market Commentary suggests that the market bottomed in October 1990 about the time expected at the beginning of the 4th quarter of the second year following the Presidential Election. The stock market often experiences its most rapid advance over the six month period from the beginning of the 4th quarter of the second year following the Presidential Election through the 1st quarter of the 3rd year. The reason this frequently occurs is that the Fed wins another bout with inflation around this time, and starts providing liquidity to stimulate the economy. The "bullish case" is based on (1.) the Fed whipping inflation and stimulating the economy, (2.) the recession being relatively mild, and (3.) that we will avoid an extended and costly "ground war" in the Persian Gulf. In addition to the above considerations, the Valuation and long and intermediate (time horizon) Liquidity Models are quite strong and confirm the set of bullish conditions. However, the market could experience some selling pressure if there are any setbacks in the battle against inflation, the severity of the recession, and the length of the war

Interest Rate Slide

As discussed and shown in recent reports, it is common for interest rates to increase over the first year and a half following the Presidential Election. The reason for this is that the Fed fights the inflationary pressures often unleased by stimulating the economy going into the Presidential Election. However, the Fed started its Soft Landing Program (i.e. designed to slow the economy and inflation to keep the expansion alive) in March 88 because the economy was strong going into the Pres. Elect. and there was concern that inflation might soar and send interest rates higher (similar to what had happened in late summer and early fall of 87). As a result interest rates initially peaked in March 89 (see chart next page) and declined to the end of the year. However, since the economy kept expanding and inflationary pressures persisted, interest rates increased over the first half of 1990. Rates started to decline in the 2nd half of the year as is the normal experience with the Presidential Cycle as the economy slowed and the core rate of inflation fell. The rapidly falling interest rates starting in the final quarter of 1990 were very bullish for the stock market. As noted in recent reports, the most bullish period for the stock market over the four year election term is often the 6, 9, and 12 month periods beginning the 4th quarter of the 2nd year following the P.E. (i.e Oct. 1990). The reason for this phenomenon is that this is the period when the Fed moves from the brake (after slowing inflationary expectations) to the accelerator and adds liquidity to stimulate the economy.

Second Cut In Discount Rate Extremely Bullish

In the Market Commentary in mid December 1990 we reported on conditions contributing to **Triple Factor Bullishness**. We discussed that the reductions in the 1. Reserve Requirement, 2. Discount Rate, and 3. Fed Funds were very bullish for the stock market. Subsequently, we reported our expectations that interest rates would fall further, and last week (after the poor employment news) the Fed cut the Discount Rate another half a point to 6 percent. This week we prepared an analysis showing the implication of cuts in the Discount Rate on the stock market over the 41 year period from 1950-1991 (2&3). Reductions in the Discount Rate have historically been very bullish for the stock market. There have been 13 reductions in the Discount Rate over this period (excluding the most recent cuts), and the stock market has typically been much stronger 6, 9, and 12 months later.

Is Market Overvalued

The S&P 500 has increased almost 15 percent from its October 1990 low, and the Price Earning Ratio of the S&P 500 has climbed to 15.8 (p. 4). This week we examine the question "has the market become overvalued" given its rapid advance over the past 4 months. One way to evaluate the level of the market is to compare the current P.E. ratio to what might be expected given the level of interest rates. The table (p. 5) shows that based on the present T-Bill, Fed Funds, Discount Rate, and 30 yr T-Bond that a P.E. of around 14 (11.2, 13.7, 14.6, & 14.4) would be expected (based on the results over the past 22 years). Given an expected P.E. ratio of around 14 and an actual ratio of 15.8 would lead to the conclusion that the market is considerably overvalued and is vulnerable to a sharp correction. However, if one studies the same relationship over the past 10 years, the expected P.E. ratio is near the current ratio of 15.8 (14.4, 16.9, 15.2, 16.5). While the P.E. ratio has become rather high, it could expand further if inflation falls to 3.5-4 percent for the year (which is plausible if oil prices stay in the low 20s and the recession forces down the increase in wages). Finally, the tight inverse relationship between the level of interest rates and the P.E. ratio is shown in the last chart (p.6).

MARKET COMMENTARY, Stock Market Project, College of Management, Georgia Institute of Technology February 10, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models - 2 Strongly Positive, 1 Positive, 1 Slightly Negative (pp. 1-4).
2. Longer Term Liquidity Models Continue To Be Strong: Daily Models Range From 86-90 (p. 5) & Weekly From 80-93. (p. 7). Long Term High Performance Sequential Combination Model (p.9) Also Bullish.
3. Daily & Weekly Portfolio Strategies All Recommend Holding A High Level Of Equities - 95-100% (pp. 6&8).
4. The 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities.
5. The Fed Continues To Ease & The Reserve Models Continue To Be Strong (pp 7, 10,11).
6. Short Term Technical & Causal Models Have Been Quite Positive Over Past Four Weeks (see p. S1-11).
7. Divergence Model Is Weak (given rapid market advance), However Offset By Strong Causal Model (p. S12).
8. Special Study: a. Interest Rates Continue Expected Fall (1) & b. S&P 500 P.E. Ratio - Fairly High? (2-4).

Long, Intermediate, And Short Term Models Are All Bullish.

Caution Warranted Since Market Has Advanced So Rapidly & May Be Becoming Overvalued.

More Bears Capitulate

It is often the case when CONDITIONS LOOK VERY BAD, and a sane person would question making risky investments, that the MARKET PRESENTS A GOOD BUYING OPPORTUNITY. This was the case in October and November 1990 when we had the quadruple problems of 1. a weak financial structure (e.g. savings & loans, banks, and some insurance companies), 2. a Federal government debt that seemed to be growing out of control, 3. a recession beginning, and 4. the Persian Gulf Crisis with a war deadline. There is no question regarding the seriousness of these problems, and that they all have to eventually be corrected if the U.S. is going to have a healthy economy with a strong financial market. On the positive side, steps have been taken in recent months to reduce our financial problems (1 and 2) through the S&L bail-out, changes in banking regulations, and Budgetary Agreement. The other two problem (3 & 4) seem to be under control with the outlook for a relatively short recession and Persian Gulf War.

As problems with the economy seemed to grow into the fall of 90, investors ran for cover and the market became *undervalued*. Then as the problems seemed to be coming under control, more and more bears were converted to the bullish camp contributing to the S&P 500 increasing almost 20 percent from its Oct. 90 low. According to CNN just last week Marty Zweig threw-in the towel and went long in stocks. The question now becomes "what is the market outlook since the many bears have been slain."

Market Becoming Fairly Valued

While we believe the market could advance a while longer, the data we review suggests that the stock market is rapidly becoming fairly valued as more bears become bulls. Last week we showed that based on a P.E. ratio of 15.8 that the market was approaching a fairly valued level in relation to the yield of the 3 mon. T-Bill, Fed Funds, Discount Rate, and 30 yr. Bond. The interest rate chart on the next page shows the rapid decline in rates over the past five months as the stock market bottomed and rapidly advanced. Key interest rates have now declined to within 50 basis points of the level at the beginning of 1987. If rates come down somewhat further as expected, this could help strengthen the underlying relationship between the P.E. ratio and interest rates and support a somewhat higher P.E. ratio.

Market Has Discounted Future Lower Inflation

Our studies suggest that the inflation outlook is the single most important factor determining the direction of the stock market (the other 2 factors are the direction of earnings and buyer psychology). This week we present a chart showing the relationship between the Price Earnings Ratio and Inflation (page 2 ahead). Based on the relationship over the past 20 years, a P.E. ratio of 16.5 would be associated with an annual inflation rate of close to 3.5 percent. As we have discussed, inflation has turned down and could be running 3.5-4 percent by the end of the year.

P.E. Ratio Becoming High

The P.E. Ratio of the S&P 500 climbed to 16.5 with the advance of the market last week. As can be observed from the chart (p. 3), the P.E. ratio has climbed to the 93 percentile based on its range over the past 17 years from 1974 to the present. The only time the P.E. ratio was higher was from 1. late in 86 until the crash in 87 and 2. in June & July 90 before the rapid market correction. Clearly the outlook for inflation has improved, but the market may have become too optimistic and may be driving prices to high and unsustainable levels.

During the prior 3 recessions the P.E. ratio fell close to 7, but in the present recession the P.E. ratio only fell to 14 (maintained twice the level of the last 3 recessions) because of the Soft Landing Program that kept inflation from rapidly rising. As a result of the limited drop in the P.E. ratio, there is not the opportunity for a large P.E. expansion as the economy recovers. Furthermore, earnings could decrease over the next two quarters due to the recession and soft economy and this could drive the P.E. still higher at the current level of the stock market. We believe that Caution Is Warranted Regarding The Stock Market Outlook Since The Market Is Rapidly Becoming Overvalued. The market is expected to go somewhat higher based on *excess optimism*, but as it does it becomes vulnerable to a major correction.

MARKET COMMENTARY, Stock Market Project, College of Management,
Georgia Institute of Technology February 18, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models - 2 Strongly Positive, 1 Positive, 1 Slightly Negative (pp. 1-4).
1.a. Special Study: Interest Rates, Inflation, & 17 Year P.E. Ratio History Suggest Market Is Approaching Fully Valued Level.
2. Longer Term Liquidity Models Continue To Be Very Strong: Daily Models Range From 88-91 (p. 5) & Weekly From 82-96 (p. 7). Long Term High Performance Sequential Combination Model (p.9) Also Bullish.
3. Daily & Weekly Portfolio Strategies Recommend Holding 100% Of Maximum Equity Exposure In Portfolios (pp. 6&8).
4. The 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 77-99 (pp. 10-14).
5. The Fed Continues To Ease & The Reserve Models Are Very Strong (pp 7, 10,11). Intermediate Horizon Models Range From 97-99.
6. Short Term Technical & Causal Models Have Been Very Strong Over Past Five Weeks (see p. S1-11).
7. Divergence Model Is Weak (given rapid market advance), However, Offset By Strong Combo Causal Model (p. S12).
8. Special Study: New Negative Sentiment Indicator Was Very Bullish In Oct. And Still Is Fairly Strong.

Long, Intermediate, And Short Term Models Are All Bullish.

Caution Warranted Since Market Has Advanced So Rapidly & May Be Becoming Overvalued.

New High For S&P 500

This past week the S&P 500 make two new all-time highs as shown on the Cover of the Market Commentary. Over the three months from mid-July to early October 1990, the S&P 500 collapsed by almost 20 percent. Over the past four months the market reversed it course and has increased close to 25 percent. Whether one got aboard the fast moving market early or later, the question still remains "How much further can the market advance before a significant correction sets in?". Ironically, the sentiment of major investment advisors in Barrons before the year end holiday season was across the board very bearish. However, this week with the S&P 500 making new highs four of six Barrons guests were quite bullish, and several of the analysts see the market advancing another 10-20 percent over the next 3-6 months. We believe that the S&P 500 is rapidly approach a "fully valued level" and significant advances from the present level would be due to "excessive optimism" and could contribute to a sharp market correction.

Market Fairly Valued

Given the rapid advance of the market the past four months, we decided to once again examine the P.E. Ratio regarding its fair market value. The table on the next page shows the Relationship Between the Level of Major Interest Rates (ranked in ascending order) and the P.E. Ratio of the S&P 500. As can be observed from the table, the current Fed Funds rate of close to 6.3 percent and the 3 month T-Bill rate of 5.7 percent have a corresponding P.E. Ratio of 17 times earnings - the present P.E. In relation to the current Discount Rate and 30 year bond yield the P.E. ratio is a little high. However, if the Discount Rate is cut again (possible if recession drags on) and the yield of the long bond drops another 30 basis points, the expected P.E. would be close to 17.5.

P.E. Ratio Is High

While the P.E. Ratio seems reasonable in relation to interest rates, the P.E. ratio is, nonetheless, very high in comparison to its recent history. At the current level of 17, the P.E. ratio stands at its 96 percentile in its range over the past 17 years (since 1974) as can be observed from the chart two pages forward. Over the past 17 years, the P.E. ratio was only higher during 1987, and it was in October of that year that the stock market Crashed. Further perspective on the level of the market can be obtained from considering the relationship between the P.E. ratio and inflation rate. As can be observed from the 3rd special chart, a P.E. of 17 would be associated with an inflation rate of only 3 percent. While inflation is certainly trending downward, most forecasts place the inflation rate at 3.5-4 percent by year end. Thus in relation to inflation, the P.E. ratio seems to be relatively high.

Some market analysts are talking about market gains of from 35-50 percent from the October 1990 low. They note that market advances of this order were experienced in 1975, 1980, and 1982-83. However, what they have failed to appreciate is that the P.E. ratio in these three instances had fallen to near 7 and that the P.E. in October, 1990 only fell to 14 (i.e. one half of the earlier levels). As we have repeatedly discussed, the Soft Landing Program of the Federal Reserve slowed the inflationary pressures in the economy during 1989 & 90 and the P.E. ratio was not beat down as in prior recessions.

Negative Sentiment Indicator

We strive to periodically add new indicators that will provide further insight into the direction of the stock market. Since we believe the Federal Reserve is the strongest factor influencing the stock market, most of our models were of a monetary characteristic (i.e. based on reserves, money supply, and interest rates). However, since the stock market does tend to become "over" and "under" valued at times, we have added several Valuation Models over the past year. This week we add an entirely new type of valuation model that is based on "negative sentiment". As can be seen from the special chart (page 4 forward), most significant market advances start when there is strong negative sentiment. As can be observed, negative sentiment was very high a year ago February and again this past October before major market advances. Market analysts are often wrong at turning points, but fairly good trend followers and right on direction. That is the reason negative sentiment is often high at turning points, but declines once a market advance gets underway.

MARKET COMMENTARY, Stock Market Project, College of Management, Georgia Institute of Technology February 25, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models - 2 Negative: Sentiment & Inflation (A&B). 3 Positive: Relative Yield (C&D) and Technical - trend following) (E) (pp. 1-5). Believe the two most important Valuation Models (A&B) are signaling caution.
2. Longer Term Liquidity Models Continue To Be Very Strong: Daily Models Range From 86-91 (p. 6) & Weekly From 84-97 (p. 8). Long Term High Performance Sequential Combination Model (p.10) Also Bullish.
3. Daily & Weekly Portfolio Strategies Recommend Holding 100% Of Maximum Equity Exposure In Portfolios (pp. 7&9).
4. The 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 74-100 (pp. 11-15).
5. The Fed Continues To Ease & The Reserve Models Are Very Strong (pp 8, 11,12). Intermediate Horizon Models Range From 97-100.
6. Short Term Patten, Technical, & Causal Models Have/Are Topping & Turning Down & Caution Advised (see p. S1-11).
7. Divergence and Combo Causal Model Turning Down Suggesting Market May Have Reached Short Term Peak (p. S12).
8. Special Study: CRB Index - Been Very Strong Since October 90 & Remains Strong.

Longer Term Models Are Bullish. **Short Term Cautious Position Advised.**

After New High?

Early last week the S&P 500 edged up to make another all-time high (see cover). The question on the minds of many financial analysts is "whether the stock market is going to move decisively higher, has topped out for the time being, or is poised to move lower". Unfortunately, as discussed below there are some reasons to think the market has become overvalued and vulnerable, and other reasons to argue that the market could climb higher.

Concern Market Is Overvalued: Based on fundamental value considerations (i.e. market in relation to forecasted inflation and current interest rates - as presented in reports last 2 weeks) and investment sentiment (i.e. herd is becoming more bullish, and that is often bearish) the market has become fully valued, and is moving into an over-valued range. However, "excessive optimism" could drive the market still higher (i.e. belief in a short recession and upturn of economy and/or a quick end to the Persian Gulf War) and make it vulnerable to a fast correction on release of bad news.

Strong Monetary Models Is Good: Concern of the Federal Reserve over the deteriorating economy has led it to rapidly increase reserves and to bring down interest rates. The daily and weekly liquidity models (our basic models) are very strong and range from 74 -100. Indicative of the Fed's effort to stimulate the economy, the intermediate reserve models are Very Strong - range from 97 to 100. Furthermore, if the economy remains sluggish the daily and weekly liquidity models (based on short, intermediate, and long term interest rates) could grow even stronger. Should the models become even stronger, a possibility that can not be ruled out, the market could be propelled still higher.

Longer Term Outlook:

The longer term Positive Scenario that could contribute to the stock market moving strongly into higher territory includes: 1. we start collecting the "peace dividend" (i.e. Persian Gulf War is quickly over with our energy future more secure plus the cold war with the Soviet Union is over), 2. the economy bottoms over the next few months and the upturn starts in the summer, 3. the fragile financial system is able to the grow its way back to health without another crisis, 4. the growth of the Federal Deficit slows and the level of debt starts to decline, and 5. inflation contracts and falls to 3 percent or lower on a sustained basis.

The longer term Negative Scenario that could keep the market from moving much higher includes: 1. the "peace dividend" is slow in coming with government and military expenditures continuing to grow as a percent of GNP as occurred over the past decade, 2. as the economy starts to recovery interest rates start advancing due to the "crowding out" of private investment by public investment (borrowing), 3. as a society we continue to try to spend more than we produce with the consequence that the "core" rate of inflation does not fall much below the 4 percent level, and falls far short of the five year objective of the Fed to get inflation down to "0".

Out longer term outlook (at this time) is neither the real "positive scenario" or that of "gloom and doom". The U.S. economy is working to solve some of its longer term problems, while other are likely be around for some time.

CRB Index

The special study this week involves the CRB Index, and we believe that this index can provide valuable insight regarding the direction of the stock market. This week the CRB Index (i.e. daily cash settlement price) reached a three year low as can be observed from the chart on the next page (p. 1). Some believe that the falling index could be a sign of coming deflation which would be detrimental to the economy and the financial markets. We do not believe that the index is falling rapidly enough to lead to deflation, but instead contracting to a point that could contribute to greater price stability in the future.

Our interest in the CRB Index (at this point) is the extent to which it is helpful in predicting short (i.e. a few months) and intermediate term change in stock prices (i.e. 1-2 years). The scale of the CRB Index is inverted in the second special chart (p.2) to allow one to observe the extent to which falling commodity prices are correlate to rising stock prices. Arrows were added to pick-up the major trend in commodity prices in the third special chart (p. 3). As can be observed from this chart, the stock market often is increasing when commodity prices are falling which intuitively makes a great deal of sense. Observe that the commodity index was falling as the S&P 500 climbed from 270 to 350 from Aug 88 to Aug 89 and that the commodity index has been falling since the market low in October 1990. *We believe that trend of the CRB Index is very significant to the movement of the stock market and we will be incorporating it into future models.*

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology March 4, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models - 2 Negative: Sentiment & Inflation Adjusted Market (A&B). 3 Positive (2 contracting): Relative Yield (C&D) and Technical - trend following (E) (pp. S1-5). Two most important Valuation Models (A&B) signaling caution.
2. Longer Term Liquidity Models Continue To Be Very Strong: Daily Models Range From 80-90 (p. 6) & Weekly From 84-95 (p. 8). Long Term High Performance Sequential Combination Model (p.10) Also Bullish.
3. Daily & Weekly Portfolio Strategies Recommend Holding 100% Of Maximum Equity Exposure In Portfolios (pp. 7&9).
4. The 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 77-100 (pp. 11-15).
5. The Fed Continues To Ease & The Reserve Models Are Very Strong (pp 8, 11,12). Intermediate Horizon Models Range From 97-100.
6. Short Term Pattern, Technical, & Causal Models Have/Are Topping & Turning Down & Caution Advised (see p. S1-11).
7. Divergence & Combo Causal Model Falling Together Suggesting Market May Have Reached Short Term Peak (p. S12).
8. Special Study: New Raw Material Model Has Turned Down Sharply Last 5 Days And So Has Synthetic Bond Index (pp. S6&7). Further deterioration of these models makes a correction ever more likely.

Longer Term Liqudity Models Remain Bullish. Fed Has Added Considerable Liquidity To System.
Short Term Models Advise Extreme Caution. Market Increasingly Overvalued - Correction Likely.

Economic Strength?

There was some evidence last week that the "economy is stronger" than previously thought to be the case. The 4th quarter G.N.P. was revised upward to -2.0 percent. Many sectors of the economy reported gains during the final quarter, and had it not been for the slumping automobile industry the G.N.P. would have been positive during the final quarter. If the slump so far has been relatively shallow and the Fed has added considerable liquidity to the system (which the models certainly suggest), then the recession could be relatively short with the rebound starting late in the second quarter.

A relatively short and shallow recession, while good for the economy, is not necessarily good for the stock market. If the economy turns around over the next few months, then it is likely that inflation will not fall very far and we may not see the 3.5-4 percent annual inflation rate forecasted by the Administration. Furthermore, an economic rebound means that the Fed will not loosen further and that interest rates may have reached or be near their low for this four year election term. While President Bush's public rating is very high now, the Pres. Elec. is still 1.75 years in the future. In order to insure Bush's re-election and a strong showing for the Republicans, the economy is going to have to turn around soon. A large portion of the "swing voters" make their choice of presidential candidates and party based on how well the economy is performing over the year or two before the election. Time is growing short, and a turn around in the economy is needed from a political standpoint. Our economic research shows that one of the most reliable economic phenomenon is that the economy is advancing over the two year period before the Presidential Election - we call this the economic Presidential Election Effect (P.E.E.)

Market Overvalued?

Last week the S&P 500 made its 4th new all-time high over the past 3 weeks. The question remains "Is the market under, properly, or overvalued?". Our research suggests that the 3 primary factors that drive the stock market are 1. inflation outlook (improving, but not likely to drive inflation below 4 percent for an extended period of time), 2. earnings (forecast by many to be down 7-10 percent for the year), and 3. psychology (moving towards over optimism). In our opinion the new highs for the market are associated with pride regarding the war and collecting the "Peace Dividend". There is some degree of truth in the advice to "buy on rumor and sell on fact". The market has been advancing almost since the war broke out the day after the deadline for Iraq to withdraw had passed. The S&P 500 is up almost 20 percent since the war broke out, and the final signing of the peace agreement is like yesterday's news. The market has in our opinion already discounted the coming of the peace.

P.E. Ratio: The S&P 500 P.E. ratio climbed to 17.15 this week which is in the upper 6 percent of its range for the past 17 years (since 1974) and on a forward basis (i.e. earnings forecasted to decline by 7-10% for the year) the P.E. ratio is in the upper 4 percent of its range (see chart 2 pages forward). There is no question that the monetary models are strong, but we believe the market has progressed from being undervalued in Oct. 1990 when the P.E. was down to near 14 to being overvalued with the current P.E. of 17.15 and a forward P.E. approaching 19. Many technical forecasters believe the market could advance another 10 percent based on the historical gains associated with the strong advance of the market so far this year. However, the market did not fall to anywhere near to the extent in this recession as was the case in the prior 3 recessions, so there is less opportunity for a rebound.

A further reason for believing the market has become overvalued is that at the end of the year money managers had a high level of cash while they now have a low level. Barron's reported (3/4/91) that 1. their survey of money managers found that cash in equity accounts had fallen from 17.5% three months ago to 11.5% now and 2. that Indata reported cash in portfolios in mid Feb. was down to 6% (from 6.9% at year-end) to the lowest level since last summer. The cash that flowed into equities during the first quarter of this year helped to fuel the sharp market advance. With 39 percent of managers surveyed by Barron's planning to raise cash, demand for stocks could fall and contribute to a market correction from its overvalued level.

Raw Material Model - Causation

New model is presented on next page.

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology March/$, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models - 2 Negative: Sentiment & Inflation Adjusted Market Return - A&B, 1 Neutral (relative yield) - C 2 Positive (relative yield) and (technical - trend following) - D&E (pp. 1-5). We believe most important Valuation Models (A&B) are signaling caution.
2. Longer Term Liquidity Models Continue To Be Strong, But Are Weakening: Daily Models Range From 74-88 (p. 6) & Weekly Models From 77-91 (p. 8). Long Term Sequential Combination Model (p.10) Strong, But Weakening.
3. Daily & Weekly Portfolio Strategies Recommend Holding 100% Of Maximum Equity Exposure In Portfolios (pp. 7&9).
4. The 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 77-100 (pp. 11-15).
5. The Fed Continues To Ease & The Reserve Models Are Very Strong (pp 8, 11,12). Intermediate Horizon Models Range From 97-100.
6. Short Term Pattern & Technical Models Are Topping & Causal Models Are Very Weak (p. S1-11).
7. Divergence & Combo Causal Model Falling, And Divergence Model Now Very Weak Which Is Often Case Before A Large Market Correction (p. S12).
8. Special Study: P.E. Studies Show That Market Is Overvalued On A Fundamental Basis (pp 1-3).

Market On Short Term & Long Term Bases Is Becoming More Overvalued And Caution Is Advised

Fundamental Value Decreasing

We have repeated several special charts this week relating to the Level Of The Stock Market to consider whether a 17.6 price earnings ratio for the S&P 500 is warranted. The first special chart shows that the P.E. ratio climbed to the 5th percentile of its range over the past 17 years (p. 1). Some market optimists expect the market to rise much further since they claim the typical bull market increases around 65% versus the 25-30% gain of the market so far. However, as the chart suggests the Soft Landing Program of the Federal Reserve kept inflation from growing rapidly. As a result, there was not the typical p.e. contract in this recession, and as a consequence the p.e. expansion is going to be rather mild. The 2nd special chart shows the relationship between the P.E. ratio and the C.P.I. (p.2). The current P.E. of 17.6 is not justified unless inflation falls to near 3 percent - a level to which only the most optimistic allude. Finally, the special table shows the relationship between the p.e. ratio and key interest rates (p.3). This chart shows that several key interest rates would have to fall from 40-70 basis points to warrant the current p.e. ratio of 17.6 of the S&P 500.

Raw Material Model

The new Raw Material Model was made one of the regular models this week (p S8), and we believe that it provides important insights into the short and intermediate direction of the stock market. The model has decreased the past 10 days, and if it continues to deteriorate the market is likely to forced into a correction.

Development Of A Complementary Set Of Models

Periodically, we believe it is useful to review the nature of the models you regularly receive. The more your understand about the models and how they operating, the greater use you will make of them and the more valuable they will become. Furthermore, we believe that the market will be relatively trendless and cyclical (swinging in a trading range) over the 1990s (as explained in a long special year end report) performing similar to the market over the 16 years from 1966 to 1982 when the Dow fluctuated in a trading range from 700 to 1000. *In a relatively* *flat and cyclical market, returns can be substantially improved by market forecasting and asset allocation.*

Initial Models:
In the early years of the stock market project the models were entirely of a (1.) Monetary/Liquidity Nature being constructed largely from different maturity bonds, reserves, and money supply. The course of the stock market is to a large extent determined by the Fed's decision regarding whether to tighten or loosen. And such decisions are based on inflationary pressures in the system plus the level at which the economy is operating. Normally when the economy expands too rapidly and inflation becomes a threat, the Fed will tighten (i.e. slow the rate of growth of the economy and possibly cause a recession) and this often depresses the stock market. Conversely, loosening by the Fed when inflation is under control is often positive for the stock market since economic activity is expanding. In the past, and on into the foreseeable future, we believe the actions of the Fed will have considerable influence on the course of the stock market. Unfortunately, the market does not advance precisely in relation to changes in the system's liquidity. At times the stock market becomes overvalued (or undervalued) relative to economic conditions and the return of alternative investment instruments.

Newer Models:
As a result we have designed a set of (2.) Valuation Models to help us determine whether the market has swung too far in one direction or another. The Valuation Models measure the current price of the market in relation to past and projected inflation, return of other financial instruments, and investment advisors sentiment (a contrary logic measure). Additionally, a set of (3.) Technical Models have been prepared to more precisely measure and forecast the shorter term movements of the market (i.e. when a trend is starting, stalling, continuing, or reversing).

Why More Models:
We believe that greater precision in forecasting the market is made possible by using the three categories of models together, rather than using only one type of model (i.e. the Monetary/Liquidity Models). For example, in Oct. 90 the Monetary/Liquidity Models, Valuation Models, and Technical Models were all three strongly positive creating a set of signs that were extremely bullish. The three models were also very positive in mid-January of this year before/as the market began its rapid climb. At the present time while the Monetary Models remain fairly strong, several of the Valuation Models suggest the market has become fully valued or overvalued.

Modeling Process:
Finally, the relative success that we have experienced in forecasting the stock market is to a large extent associated with the nonlinear modeling method (closely related to chaos theory) that we have pioneered and use extensively in model building. *Our goal is to strive to improve the existing models and to develop new models that provide further insight into the direction of the stock market.*

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology March 18, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models - 2 Negative (A&B): Sentiment & Inflation Adjusted Market Return, 1 Neutral (C): Relative Yield, 1 Positive (D) But Declining: Relative Yield, and 1 Strong (E): Trend following (pp. 1-5). Valuation Models continue to suggest that market overvalued and caution is advised.
2. Longer Term Liquidity Models Strong, But Are Weakening. Daily Models Range From 75-90 (p. 6) & Weekly Models From 76-89 (p. 8). Long Term Sequential Combination Model (p.10) Strong, But Weakening.
3. Daily & Weekly Portfolio Strategies Recommend 100% Of Maximum Equity Exposure In Portfolios (pp 7&9).
4. The 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 78-100 (pp. 11-15).
5. The Fed Continues To Ease & The Reserve Models Are Very Strong (pp 8, 11,12) - Range From 75-100.
6. Short Term Pattern & Technical Models Are Topping & Causal Models Are Weak (p. S1-11).
7. Divergence & Combo Causal Model Now Weak (p. S12).
8. Special Study: P.E./Dividend Analysis Suggests Market Is Overvalued On A Fundamental Basis (pp 1-3).

Market On Short Term & Long Term Bases Is Becoming More Overvalued And Caution Is Advised

Fundamental Value

Price Earnings Ratio: A question of considerable importance to equity managers is whether the market is fairly valued, undervalued, or overvalued. This week we present a somewhat different perspective on the level at which the market is valued. The S&P 500 P.E. Ratio this week is 17.5 - at the upper 5 percent of its range over the past 17 years (p. 1). *The advance of the S&P 500 over the past 2.25 years (since late 1988) has been almost entirely due to the expansion of the P.E. multiple from 12 to 17.5 - due to improvement in investors' psychology.* Earnings have been plotted along with the P.E. Ratio on the 2nd companion chart (p. 1a), and this chart shows that earnings are little changed from 2.25 years ago. To support such a high P.E. ratio, earnings would have to increase and/or inflation come way down over the year. The economy would have to bounce back sharply for earnings to improve much this year, and this does not seem to be likely given the economic weakness reported this past week (i.e. industrial production and capacity utilization down, 1st ten days of March car sales down, and business inventories up).

Producer Price Index: If earnings are largely unchanged for the year, then the inflation picture would have to fall to near the 3.5 percent level to justify the current P.E. (p. 4). Over the past 2 months the core rate of the Producer Price Index has advanced increasing .5% and .4% after a 12 month slide, and this does not bode well for the CPI. This week's C.P.I. report could have a strong impact on the market, and if the number is not low for (i.e. .1-.2% for Feb.) the market could deteriorate.

Dividend Yield: The S&P 500 Dividend Yield (like the P.E. ratio) can also be used to help assess whether the market is fairly valued, undervalued, or overvalued. Unfortunately, the S&P 500 dividend yield (presently 3.26%) has fallen to the lower 5 percentile in its range cover the past 17 years (p. 3). It was only lower during 9 months in 1987 - before the 1987 Market Crash. As discussed before, the market is often vulnerable when the dividend yield falls below 3.3 percent. In summary, the market seems to us to be overvalued with the S&P 500 Dividend Yield at its 5th lowest percentile while the P.E. Ratio is at its 5th highest percentile. The factor that we believe is driving the market to an unsustainable level is the coming of peace in the Persian Gulf, and that we are feeling good about ourselves as a country. However, the Peace Dividend is well off in the future (if it every occurs), and in the mean time we have serious domestic problems that have to be addressed (i.e. recession, huge Federal Budget deficit, heavily indebted consumer market, a shaky financial structure with S&L & banking problems, and an eroded international competitive position).

A Further Discount Rate Cut

Last week when Chm. Greenspan spoke, he did not rule-out the possibility of a further discount rate cut if the economy does not bottom and start to recover fairly soon. With the Fed Funds rate falling below 6 percent (last three days) and the poor industrial production and capacity utilization numbers that came out on Friday, there is speculation that the Fed will feel compelled to cut the Discount Rate. It is often beneficial to the stock market when the Fed starts reliquifying the economic system such as occurred over the past few months (Fed Funds rate, Reserve Requirement, and Discount Rates were all cut - a policy change that we called Triple Factor Bullish). However, if the Fed forces rates down too low as it tries to slow the economic decline and bring about a recovery, it could contribute to bringing back of inflation. This happened before when the Discount Rate was reduced below 6 percent as shown on the 4th special chart (p. 3). We fear that the Fed is so anxious to get the economy moving with the low domestic approval rate of the Administration that it will forget about fighting inflation (remember Greenspan's objective of getting inflation down to "0" over a five year period).

ARKET COMMENTARY, Stock Market Project, School of Management, eorgia Institute of Technology March 25, 1991 by Professor Fred Allvine

Model Results

ation Models (fundamentally unchanged) - 2 Negative (A&B): Sentiment & Inflation Adjusted Market urn, 1 Neutral (C): Relative Yield, 1 Positive, (but declining) D: Relative Yield, and 1 Strong (E): Trend llowing (pp. 1-5). Valuation Models continue to suggest market somewhat overvalued & caution is advised.
onger Term Liquidity Models Strong, But Are Deteriorating. Daily Models Range From 78-91 (p. 6) & Veekly Models From 75-90 (p. 8). Long Term Sequential Combination Model (p.10) Strong, But Weakening.
Daily & Weekly Portfolio Strategies Recommend 100% Of Maximum Equity Exposure In Portfolios (pp 7&9).
. The 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 78-100 (pp. 11-15).
5. The Fed Continues To Ease & The Reserve Models Are Very Strong (pp 8, 11,12) - Range From 81-100.
6. Short Term Pattern & Technical Models Down Past 2 Weeks As Market Corrected & Remain Weak (p. S1-11).
7. Divergence & Combo Causal Model Strengthened After Market Correction Past 7 Days (p. S12).
8. Special Study: New Basic Factor Index Explained (be made a permanent model next week) (see pp 1-3 & 3a).

Market Now Judged To Be From Fairly To Overvalued On A Short Term & Long Term Bases
5 Month Bull Market Continues, While Contraction May Be Extended Somewhat Further

Model Logic

Over the past 3-6 months, we have idded a number of new models iaving characteristics different from our fundamental Monetary/Liquidity Models (i.e. Part 2 - charts 6-15 long and intermediate horizon nodels) to broaden our perspective egarding the factors influencing the najor direction of the stock market. The Valuation Models (i.e. charts -5 of set showing Long and ntermediate Horizon Models) are lesigned to help us determine when he market is either Overvalued or Jndervalued. Strong MARKET ADVANCES normally occur when he market is both Undervalued (as ndicated by the Valuation Models) nd the Monetary/Liquidity Models re rapidly improving (or are high) conditions from Oct. 90 - Mar. 1. Conversely, Market Tops often ccur when the Monetary/Liquidity Aodels and Valuation turn down like happened last 2 weeks), and MAJOR MARKET CONTRACTIONS occur when the Monetary/ Liquidity and Valuation Models are apidly deteriorating. These longer nd intermediate horizon models are esigned primarily for the purpose f Asset Allocation.

Ve have also developed a set of hort Term Models (i.e. charts 1-3 - Part 1) to determine factors riving the market over a period of few days to a few months. The urpose of these models is to determine when a change is developing in the major trend of the market - either upward or downward. In addition, the short term models can be used for deciding when to commit more funds to equities and when to build cash. Furthermore, the short term models can be used to enhance market return through buying calls and puts in the futures market.

Towards Causation

The basic Monetary/Liquidity Models are constructed from 1. returns of different maturity debt issues and 2. from factors influenced by the Federal Reserve (i.e. reserves and money supply). We are now moving in our modeling effort to determine what factors influence the changes in Fed policy and return of different debt instruments.

Raw Material Model: A few weeks ago we introduced a Raw Material Model (p. S8) which we believe provides additional insight into the changing yield of debt instruments and in Fed policy variables. Over the past 21 months, the market has advanced rapidly in three major upward burst and in each case the Raw Material Index was rapidly advancing. The rapid advance of the market from Oct. 90 to Mar. 91 corresponded with a sharp increase in this model. Furthermore, the market moved either sideways or downward when the Raw Material Index was decreasing.

Another BASIC MODEL: Given the attractiveness of the Raw Material Model, we examined other basic factors of production and have uncovered another category of variable that also does an excellent job in signaling the short and intermediate direction of the stock market. The new Basic Factor (of production) Index is plotted with the S&P 500 on the special charts shown on the next four pages (pp. 1-3&3a). The three major advances of the market during 1988 occurred when the Basic Factor Index was rapidly improving (p. 1). Again, the 40-50 point gain in the S&P 500 from Mar. - Aug. 1989 occurred as the Basic Factor Index was rapidly improving. Lastly, the 40 point gain in the S&P 500 from Feb. - Jul. 1990 and the 80 point gain from Oct. 90 - Mar. 91 occurred as the Basic Factor Index was steadily improving. In contrast the Basic Factor Index was rapidly deteriorating as the S&P 500 fell sharply from July to Oct. 1990.

Plans: In the near future, we will develop a Short Term Combination model (incorporating data from the Bond Index, Raw Material Index, and Basic Factor Index) that could be quite useful in forecasting short term market movements lasting from a few days to a few months.

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology April 1, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models: A&B Negative - Sentiment & Inflation Adjusted Market Return, C Neutral To Negative - Relative Yield, D Positive But Deteriorating - Relative Yield, and E Very Strong - Trend Following (pp. 1-5). Valuation Models continue to suggest that market has become Fully Valued and Caution Is Advised.
2. Longer Term Liquidity Models Strong, But Are Weakening. Daily Models Range From 73-91 (p. 6) & Weekly Models From 67-91 (p. 8). Long Term Sequential Combination Model (p.10) Strong, But Weakening.
3. Daily & Weekly Portfolio Strategies Recommend 100% Of Maximum Equity Exposure In Portfolios (pp 7&9).
4. 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 79-100 (pp. 11-15).
5. The Fed Continues To Ease & The Reserve Models Are Very Strong (pp 8, 11,12) - Range From 76-100.
6. Short Term Pattern Show Signs Of Turning Up, But May Be Due To End Of Quarter Pension Fund Purchasing. (p. S1-11).
7. Divergence & Combo Causal Model Weak (p. S12).
8. Special Studies: Assessment of Model Performance (pp 1-5) & More Analysis Of New Raw Material B Model.

On A Short Term Fundamental Basis Market Is Becoming Overvalued.
On A Longer Term Basis Market Remains Bullish. Overall CAUTION ADVISED.

Fundamental Value

Presidential Election Cycle Calls Turn Again: As noted last Fall, we were entering one of the most bullish 6 month period of the 4 year Presidential Election Cycle from the 4th quarter of the 2nd year after the P.E. through the 1st quarter of the 3rd year (i.e. Nov. 90 -Mar 91). This is the 6 month period when the market normally turns upward after the Fed has gone through an extended period of tightening to slow the economy to bring inflation under control after the election. The S&P 500 is up almost 30 percent from its October low, and the gain of small stocks has been even more spectacular (i.e. Nasdaq made a record advance during the 1st quarter of this year). While we believe that the Bull Market continues, our analysis suggests that the market for the time being is pushing into over-valued territory, and particularly if it breaks to new highs this week which is entirely possible.

5 - 5 Warning: After the advance last week, the S&P 500 is back close to its all-time high where it was two weeks ago - the P.E. ratio at 17.5 is at the top 5 percent of its range over the 17 year period since 1974 and the dividend yield is at the lowest 5 percent of its range. Nonetheless, the market could push into new high territory this week since there are still a large number of Bullish Advisors that recommending more commitment to stocks - small stock getting a big push. Their logic is that Bull Markets often advance from 60-80 percent, and that we have much further to expand. The major deficiency of this analysis is that it falls to recognize that the market did not experience the large historical sell-off before the advance began - S&P did not fall below the level of where it started the first post Presidential Election year 1989. Without the sharp sell-off (because of the somewhat successful Soft Landing Policy of the Federal Reserve), there is not the normally rebound to be experienced when the market turns upward. Furthermore, the last 3 Bull Markets started with a P.E. ratio of close to 7.5 percent while this Bull Market started with a P.E. of nearly 14. When the market has been severely beaten down, the gains are much more spectacular than when the market has not been destroyed by sudden tightening of Fed after Pres.Elec.

Model Assessment

This week we have charted the results of the Longer Daily and Weekly Liquidity Models (recommend moving into stocks when they climb to above 60-70 and moving out of stocks when they fall to 20-25) plus the 50 Series Models (designed to move into stocks when models above 50 and out of equities below 50). The Cover of the Report this week shows the Performance of the Daily Long and Intermediate Term Liquidity Models (i.e. constructed from different maturity interest rates). We believe that the models provide very important insight into the direction of the stock market, and that they can be used to significantly increase return through (1) asset allocation (i.e. raising or lowering stock market exposure) or from (2) enhancement through the buying of puts and calls in the futures market to take advantage of shorter term market movements. The first 3 special charts (pp. 1-3) show the results for the 50 Series Model with attention paid to the combined impact of the Long Term Liquidity Model and Reserve Model (reserve model is less stable, and normally increases before most market advances). The 4th special chart shows the results of the Weekly Liquidity Models and the 5th chart shows the results of the Daily Liquidity Models that were presented on the Cover Of The Market Commentary. (The Short Term Liquidity Models have not been downgraded since they they have proven to be relatively poor in forecasting the stock market due to the Fed's Soft Landing Policy).

New Raw Material "B" Index

Last week we introduced a 2nd Raw Material Variable that we believe can be quite useful in helping to forecasting shorter and longer term market moves. The development of this Index (along with the 1st Raw Material Index) is consistent with our desire to move beyond building models based on correlated variables that signal the direction of the stock market (e.g. interest rates, reserves, and, money supply). We believe the new Raw Material variables move closer to causation and cover factors that influence the correlated variables. The new Raw Material "B" variable is plotted in 2 sections to better show how it influences the market (5-89 to present and 7-90 to present). As can be observed, when the Index is advancing the market is normally upward trending; and, conversely, when the Index is deteriorating the market is often declining. It is our intention to develop models scaled from 0-100 for the new Raw Material Indexes, but this will take sometime.

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology April 8, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models: A&B Negative - Sentiment & Inflation Adjusted Market Return, C Neutral To Negative - Relative Yield, D Approaching Neutral - Relative Yield, and E Very Strong - Trend Following (pp. 1-5). Valuation Models continue to suggest that market has become Fully Valued and Caution Is Advised.
2. Longer Term Liquidity Models Strong, But Have Weakened. Daily Models Range From 76-92 (p. 6) & Weekly Models From 67-91 (p. 8). Long Term Sequential Combo Model (p.10) Strong, But Weakening.
3. Daily & Weekly Portfolio Strategies Recommend 100% Of Maximum Equity Exposure In Portfolios (pp 7&9).
4. 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 77-100 (pp. 11-15).
5. The Fed Continues To Ease & The Reserve Models Are Very Strong (pp 8, 11,12) - Range From 70-100.
6. Short Term Causal Model Strong & Could Contribute To Market Advance If Inflation Nos. Good (p. S1-11).
7. Divergence & Combo Causal Model Neutral (p. S12).
8. Special Studies: 50 Series Reserve Model (see cover & p. 12.b.). New Raw Mat. B Model Again Next Week.

Market Is Fully Valued To Overvalued On A Short Term Basis. Much Depends On PPI & CPI. On A Longer Term Basis Market Remains Bullish. Overall CAUTION STILL ADVISED.

Model Assessment

The different horizon Liquidity/Monetary Models (long = 3 - 4 yrs., intermediate = 1 - 2 yrs., and short term = few wks. - few mon.) are all designed to measure the changing pressure for financial resources in the economic system. The models are constructed from different maturity interest rates, reserve factors, and money supply. The models are designed to be advancing when liquidity is improving (i.e. supply is increasing relative to demand), and that is normally good for stock prices (also depends on level of Valuation Models). Last week we reviewed the performance of several of Longer Horizon Daily and Weekly Models and two Intermediate Horizon 50 series models. The data continues to support the conclusion that the Liquidity/Monetary Models are highly correlated to the change in stock prices.

50 Series Reserve Model: Once again this week we want to focus your attention on the 50 Series Reserve Model featured last week, since we believe it provides some startling insight into the movement of stock prices that we have failed to observe in the past. The special chart shown on the cover of the report (and on next page) is the same chart we have been producing regularly on page 11 on the intermediate and long term horizon models. The only difference is that this chart shows the results for the past 6.25 years from 1985 (rather than 1982) to the present. Please observe that over the six complete years that the reserve model was growing rapidly during the first 6 months of the year and the stock market was rapidly advancing. The pattern has been strong so far this year as the reserve model has soared to its highest level of 100 and the market has increased very rapidly.
Results: The S&P 500 (see table) has gained an average of 36 percent (annualized) over the first six months of the year while gaining only 0.8 percent over the 2nd half of the year.

Why Pattern? It could be that the rapid increase of the reserve model and the market during the first half of the year is due to chance, but we do not believe this to be the case. Instead, we believe that there is strong economic logic supporting the reserve model/stock pattern observed. The 1st qtr. of the year is the slowest when the weather is bad, construction is down, and people are staying at home. Conditions start to improve during the 2nd quarter of the year as the weather becomes less harsh. The economy picks-up substantial during the 3rd quarter summer vacation months and continues strong through the final holiday quarter of the year (also lots of football and outdoor activities). Due to the seasonality of the economy, reserves are increased during the first half of the year to give the economy a boost. With demand being slack interest rates often decline and the stock market advances. While stock prices can advance during the 2nd half of the year, this is less likely to happen than during the first part of the year. The reserve picture worsens and interest rates rise during the 2nd half of the year which is not conducive for a strong stock market.

Implication For Near Future? The upturn in the 50 Series Reserve Model since last November coincided with the market bottom, and the surge in the Reserve Model has paralleled the rapid advance of the stock market. Now what about the 2nd quarter? As can be observed from the chart, the advance of the S&P 500 during the 1st qtr. is normally much stronger than during the 2nd (case from 85-88, but not for 89 & 90). Based simply on strength of reserve model one could make a case for a reasonably strong 2nd quarter. However, we remain skeptical since the the "5" and "5" condition continues - the S&P 500 P.E. ratio at 17.5 is at the top 5 percent of its range over the past 17 years (since 1974) and the dividend yield is at the lowest 5 percent of its range. This indicates to us that the market is becoming over-extended and vulnerable. If the market advances much above its current level (and become more over-extended), a major correction is likely during the 2nd half of the year.

A Volatile Week For Market

Our studies show that the trend in inflation is the most important determinant of change in stock prices. We will find out at the end of the week whether after two bad monthly reports the PPI and CPI improves, or continue its recent deterioration. If the numbers are good, as the consensus expects, then the market could push to new highs. However, if the numbers are disappointing, the market could experience considerable selling pressure. At the present, we are not happy with the inflation outlook for the remainder of the year, and will discuss our views on this subject next week.

Annualized Change In S&P 500 Over 1st 6 Months When Reserve Model Strong Versus 2nd 6 Months

Year	1st Half	2nd Half
85	33.2	19.4
86	41.8	-2.1
87	56.6	-36.0
88	21.0	15.7
89	31.1	23.5
90	2.6	-15.7
91 *	65.4	n.a.
Average	36.0	0.8

*1st qtr. annual rate

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology April 15, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models *Unchanged*: A&B Negative - Sentiment & Inflation Adjusted Market Return, C Neutral To Negative -Relative Yield, D Approaching Neutral - Relative Yield, and E Very Strong - Trend Following (pp. 1-5). Valuation Models continue to suggest that market has become Fully Valued and Caution Is Advised.
2. Longer Term Liquidity Models Strong. Improved After Weakening. Daily Models Range From 77-93 (p. 6) & Weekly Models From 68-90 (p. 8). Long Term Sequential Combo Model (p.10) Strong & Has Turned Up.
3. Daily & Weekly Portfolio Strategies Recommend 100% Of Maximum Equity Exposure In Portfolios (pp 7&9).
4. 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 82-100 (pp. 11-15).
5. The Fed Continues To Ease & The Reserve Models Are Very Strong (pp 8, 11,12) - 3 Of 4 Are From 90-100.
6. Short Term Models Pointing Upward, But Market Highly Prices & Sensitive To Quick Change (p. S1-11).
7. Divergence & Combo Causal Model Neutral (p. S12).
8. Special Studies: P.E. Fundamental Value Analysis (pp 1-3). New Insider's Trading Model (pp 4&5).

On A Short Term Basis Market Is Overvalued Which Often Happens During Bull Markets. On A Longer Term Basis Market Remains Bullish. Short Term Caution Still Advised.

What's Firing Market

The 3 most important factors that can drive a market higher are 1. improved inflation outlook, 2. earnings outlook, and 3. buyer optimism. Right now all 3 elements of a bull market seem to be in sync. Inflation is coming down, Zack forecasts earnings to be up slightly for year, and buyers are optimistic (news letter sentiment highest in a long while - see Valuation Model A on p. 1). In the short-run (i.e. next few weeks and even months), the market could move higher as investors like the news they are receiving. However, the danger is that these good signs can lead to a market becoming considerably overvalued and vulnerable to a correction. As suggested on the Cover of the Commentary, the market may climb higher (Dow to 3000-3100 and S&P 500 to 380). However, if it does, the likelihood of a sharp market correction in the 3rd quarter (when market frequently gets slammed) is strong since this is when several factors will be putting upward pressure on interest rates.

Inflation Outlook

Inflation News Good For Market: As noted in last week's report (section entitled A Volatile Week For Market), "If the numbers are good (PPI & CPI), as the consensus expects, then the market could push to new highs." The numbers were good, and the S&P 500 labored ahead to another new high (the last of several over the past few weeks - see cover). The Soft Landing (Fed gradually tightened from Mar. 88 to Mar. 89) did achieve its purpose of slowing the economy and inflation (we did have a recession as was inevitable, but it's a mild one).

Outlook For Inflation: Our research suggests that the trend in inflation is the most important determinant of stock prices. There is no question that rates are headed downward from the high level in 1984 (up 6.4% for year and highest level since 1982). However, we believe that rates are not coming down very far for several reasons. A. This is going to be a mild recession since the next Pres. Elect. is only 18 months away, and the "Fed has the pedal to the metal" (3 of 4 reserve models are presently from 90 to 100). As the economy recovers, interest rates are likely to rise. While the CPI was down for the month (last happened in early 86' when oil plunged), the outlook is not good for inflation falling below 4-5 percent on an annual basis for an extend period of time (i.e. 6 months or longer).

Statements About Inflation: We will report on 3 statements suggesting that inflation is not going to come down very far from its recent high during 1990. 1. Chm. of the Atlanta Fed (and member of Open Market Committee) Robert Forrestal stated that it may be necessary for the Federal Reserve to "tolerate slower progress against inflation than we had earlier hoped for" - 0 Inflation In 5 Years (Investor's Daily 4/4/91 p.21). Forrestal indicated that he expected inflation to abate somewhat as the year progresses, but that it will still average *4% -4.5% by year end* (not good for stock market). 2. From Forbes "What's Ahead For Business" (4/15/91 p.35) "The total U.S. demand for funds this year has reached record levels (Federal deficit = $320 and state and local $105). ... U.S. also faces the costs of meeting demands for extra aid this year from Gulf allies ... . Given the continuing deficit, the U.S. needs to attract foreign investment. ... -- and we *may have to raise interest rates to get it*. 3. Patrick C. Jackson, A Labor Department Supervisor responsible for the consumer price data, stated on Friday that the core rate of inflation during 1991 would be about the same as posted in 1990 (which was highest since 82). Furthermore, overlooked in the market's enthusiasm for the overall CPI report for the month was that the core rate of inflation increased at a 6.8 annual rate over the first quarter of 91. It appears that the Battle Of Inflation has not been won and that's bad for the market outlook over the next 3-6 months.

Market Is Overvalued On Fundamental Basis

The market is not cheap and once again we present charts showing that the market is climbing to heights that may not be sustainable. The 1st special chart (p.1) shows that a P.E. ratio of 17.9 for the S&P 500 is associated with a 3 percent inflation rate (present annual rate of 4.6%). The 2nd special chart shows that the P.E. ratio has climbed to the upper 4.5% level of its range over the past 71 years since 1974 (p.2). The 3rd special table shows some conflicting results (p.3). The yields of the 3 mon. T-Bill and Fed Funds does seem to support the current P.E., and possibly even a slightly higher P.E. (p.3). However, we believe the more important factor is the relationship between the P.E. and long bond yield. The long bond yield would have to fall to near 7.5% from its current 8.14% to support the present level of the P.E.

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Model Results

1. Valuation Models A,B, & C Negative - (Sentiment, Inflation Adjusted Market Return, & Relative Yield), D Neutral (Relative Yield), and E Very Strong -(Trend Following) (pp. 1-5). With The Exception Of Trend Following Model, Valuation Models Continue To Deteriorate And **Strongly Suggest Market Overvalued**.
2. Longer Term Liquidity Models Strong. Improved After Weakening. Daily Models Range From 76-93 (p. 6) & Weekly Models From 69-92 (p. 8). Long Term Sequential Combo Model (p.10) Strong & Has Turned Up.
3. Daily & Weekly Portfolio Strategies Recommend 100% Of Maximum Equity Exposure In Portfolios (pp 7&9).
4. 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 82-100 (pp. 11-15).
5. Fed Still Pursuing Easing Policy & Reserve Models Are Strong (pp 8, 11,12) - 3 Of 4 Are From 90-100.
6. Short Term Models Topping & Pointing Down. Market Very High - Overvalued & Vulnerable (p. S1-11).
7. Divergence Model Weak, Suggesting Mkt. Overvalued. Will Worsen If Causal Model Declines (p. S12).
8. Special Studies: A. Fundamental Value Analysis (pp 1-4). B. Bond Direction. C. Raw Material "B" Model.

On A Short Term Basis Market Is Overvalued And Could Experience A Sharp Correction. On A Longer Term Basis Market Remains Bullish. Short Term Caution Still Advised.

What's Driving Market?

As discussed last week, our studies show that the 3 most important factors that drive a market higher are 1. improved inflation outlook, 2. earnings outlook, and 3. buyer optimism. In our judgement the market has already discounted the improved inflation outlook (we do not believe that it will be as good as some expect) and the possibility that earnings could increase a little. The factor that is driving the market now is Positive Investor Psychology which often sets in near market highs. Newsletter writers are very bullish (see Valuation Model A - p 1), and that is bearish. The reason for this in our opinion is that most of the newsletter writers do not have *causal* and valuation models and are fundamentally trend followers. While they are often right on the trend, they tend to be bearish at bottoms (e.g. throughout 1988, Oct. 90 & Jan. 91) and bullish at tops (Aug. 87, Oct. 89, & Jul. 90). Unfortunately, the bullishness of the newsletters tends to encourage the small investor to plunge into the market near the top and to sell out near the bottom.

Market More Overvalued

The market indexes made new highs this past week and in our view the market is becoming more overvalued on a fundamental basis. The 1st special chart (p.1) shows that dividend yield of the S&P 500 at 3.16% is at the lowest 4.5% of its range over the past 17 years, and the 2nd chart shows that the P.E. ratio at 18.0 is at the highest 4.5 percentile of its range. The 3rd special chart shows (p.3) that the CPI would have to fall to 3.0 percent (far below most estimates) to sustain an 18.0 P.E. The 4th special chart shows that the advance of the S&P 500 since late 1984 to the present of close to 50 percent is almost entirely due to P.E. expansion from 12 to 18. The 5th special chart shows the average seasonal change over the past 10 years in the yield of the long bond from approximately April 18 - May 3. The chart shows the long bond tacked on 23 basis points over this 11-12 day interval due to large seasonal selling of bonds by the private and public sector. The seasonal pattern was explained in an article in Investor's Daily (April 15, p. 1). Richard Spurgin, director of research at Technical Data, who has studied the pattern believes that corporate and Federal borrowing will be particularly high over this 2 week period and could send the yield of the 30 year bond up 50 basis points from 8.25 to 8.75. Given the already high and vulnerable nature of the market, an increase of 20-30 basis points could send the market down sharply (a higher increase as per Spurgin would be disaster).

Raw Material B Index

This week we make the 2nd raw material index a permanent part of the weekly report. The comments of this index are entirely different from the first raw material index. Extensive studies that we have done suggest that the 2 raw material indexes have a great influence on the stock and bond markets and move us closer to causation of what leads the Fed to take action that we closely follow (interest rates, reserves, & money supply). We present charts covering 3 different time periods for you to review - 3/89 - present, 7/90 to present, and 1988 (pp. 6-8). We believe that at times the market moves in lock step with the Raw Material B model, and we encourage you to review the charts closely to see if you concur. Over time we will be using both of the raw material indexes more in our modeling effort.

Higher Gasoline Prices

Last week the financial journals reported that gasoline inventories were at their lowest level in 16 years and that gasoline prices could rise very rapidly. On Saturday The New York Times suggested that gasoline prices could increase 10-15 cents by mid-May. The problem with U.S. refiners trimming their inventories to such low levels is that this becomes an invitation for the OPEC countries to increase their crude oil prices. It will be very bad for the stock and bond markets if gasoline prices climb to near the forecasted level and carry crude oil prices higher. The prospects of higher energy and higher bond yields make the stock market look even more vulnerable to us at this time.

Model Results

1. Valuation Models A-E <u>All Negative</u> - (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt) and F <u>Very Strong</u> -(Trend Following) (pp. 1-6). With The Exception Of Trend Following Model, Valuation Models Continue To **<u>Suggest Market Overvalued</u>**.
2. Longer Term Liquidity Models Strong. Improved After Weakening. Daily Models Range From 76-93 (p. 7) & Weekly Models From 70-93 (p. 10). Long Term Sequential Combo Model (p.12) Strong & Has Turned Up.
3. Daily & Weekly Portfolio Strategies Recommend 100% Of Maximum Equity Exposure (pp 9 & 11).
4. 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 83-100 (pp. 13 & 15-17).
5. Fed Still Pursuing Easing Policy & Reserve Models Are Strong (pp 10, 13, 14) - 3 Of 4 Are From 88-100.
6. Short Term Models Continue To Contract. Market Still Very High - Overvalued & Vulnerable (p. S1-11).
7. Divergence Model Improving As Market Contracts. Will Worsen If Causal Model Declines (p. S12).
8. Special Studies: A. Fundamental Value Analysis - Repeat (pp 1-3). B. Forecast Of Market Gain (pp 4-5).

<u>Believe Stock Market On Short Term Basis Is Overvalued And Could Continue To Contract</u>. <u>On A Longer Term Basis Market Remains Bullish</u>. <u>Short Term Caution Still Advised</u>.

Market Still Overvalued

As discussed above, the basic liquidity models constructed from reserves, money supply, and interest rates (using our innovative nonlinear pattern recognition process which is closely related to chaos theory) remain relatively strong. For that reason we believe that the bull market continues. However, the market has become overvalued (5 of the 6 Valuation Models are negative) which often happens during bull markets, and thus the stock market contraction is likely to continue for some time. The "5" and "5" condition still exists suggesting that the market is overvalued. The P.E. Ratio (S&P 500) is 17.76 and in upper 5 percent of its range while the Dividend Yield (S&P 500) is in the lower 5 percent of its range cover the past 17 years (since 1974). Where many forecasters went wrong was expecting the bull market to advance upwards to 80 percent as has been the historical experience. However, they failed to recognize that the P.E. only contracted to 14 during the recession instead of below 8 during the prior 3 recessions.

Poorer Market Environment

Over the past few weeks we have discussed that the 3 engines of an advancing market are 1. improved inflation outlook, 2. better earnings forecast, and 3. buyer optimism. Clearly inflation is headed downward, but probably not much below 4% for any extended period of time (see special chart on next page). The market newsletters have become very bullish (a contrary logic indicator) encouraging small investors to get in near the market top (see Bull vs. Bear Chart on page 1). However, a few bad weeks for the stock market will cause the trend followers to reverse course and stop encouraging small investors to buy stock. The worst news for the market this past week is that the *recession seems to be worse than expected* and could extend far into the summer. This means that forecasts for earnings to advance this year are now being called into question. More specifically the bad news for the week is that the first quarter G.N.P. was worse than expected suggesting that the recession is likely to be more stubborn than earlier expected. While consumers kept spending during the final quarter and held inventories in check, this did not happen during the first quarter of this year. Automobile sales continue to be a disappointment, and suggest that consumers are still reluctant to increase spending on durable goods. Furthermore, manufacturer's new orders slipped for the 4th month and that is not positive. Ironically, the government that is calling for stepped up economic activity was a major contributor to the decline in orders. *Until the economy turns around, there is little chance for any significant improvement in earnings and that is another negative for the stock market.*

Research Continues

Our goal is to develop the best set of models possible for forecasting the stock market. The Valuation Models and Short Term Models have been added and expanded over the past 6-9 months. The short term models can be used to better time commitments to the stock market, and also for a variety of market enhancing techniques. The Valuation Models are helpful in assessing when the stock market is <u>undervalued</u>, <u>fairly valued</u>, and <u>overvalued</u> and they complement the liquidity models. In October 1990, the Valuation Models suggested the market was undervalued (i.e. excess selling had occurred) and as the liquidity models and portfolio strategies rapidly improved the stock market began its sharp advance. In recent weeks, as the market labored to make slightly higher highs, the Valuation Models indicated that the market was becoming overvalued and Caution Was Advised concerning the short term outlook. This week we make the new Insider's Buying Indicator (see cover) a permanent part of the weekly report and it should help us determine when the stock market is becoming more or less attractive. Next week we will introduce an entirely new use of the models to forecast changes in the S&P 500 over varying time horizons (4, 8, 13, 26, & 39 week periods). Then in a few weeks, we hope to introduce a new bond model that we have been working on.

MARKET COMMENTARY, **Stock Market Project, School of Management, Georgia Institute of Technology MAY 6, 1991 by Professor Fred Allvine**

Model Results

1. Valuation Models A-E All Negative - (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt) and F Very Strong - (Trend Following) (pp. 1-6). Continue To Suggest **Market Overvalued**. Recommend Reviewing Performance Of Valuation Model E (p.5)
2. Longer Term Liquidity Models Strong. Improved As Fed Eases. Daily Models Range From 72-94 (p. 7) & Weekly Models From 74-94 (p. 10). Long Term Sequential Combo Model (p.12) Strong & Has Turned Up.
3. Daily & Weekly Portfolio Strategies Recommend 100% Of Maximum Equity Exposure (pp. 9 & 11).
4. 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 83-100 (pp. 13 & 15-17).
5. Fed Still Pursuing Easing Policy & Reserve Models Are Strong (pp. 10, 13, 14) - 3 Of 4 Are From 86-100.
6. Short Term Models Up Slightly. Market Still Very High - Overvalued & Vulnerable (p. S1-11).
7. Divergence Model Improved As Mkt. Corrected & Causal Model Improved. Possible Short Term Advance Towards Top Of Range (p. S12).
8. Special Studies: A. Fundamental Value Analysis - Repeat (pp. 1-4). B. 3rd Report Fed Easing (pp. 5-7). C. New Return Matrix For Forecasting Stock Price Change (pp. 8-11).

Some Signs Of Short Term Strength. However, Expect Volatile Stock Market Due To Big Bond Auction. Longer Term Basis (towards Pres. Elect.) Remain Slightly Bullish.

Market Somewhat Overvalued

We continue to present extra charts showing the level of the S&P 500 P.E. ratio and the S&P 500 dividend ratio (pp. 1-4). The extra charts plus the collection of Valuation Models (5 of the 6 Valuation Models are negative) continue to suggest that the market has become *over-extended* and in the *slightly overvalued* range. The "5" and "5" conditions still exist with the P.E. Ratio (S&P 500) at 17.84 in the upper 5 percent of its range, while the Dividend Yield (S&P 500) is 3.20 percent and in the lower 5 percent of its range covering the past 17 years (since 1974).

3rd Cut In Discount Rate

The Federal Reserve started easing in the final quarter of the year as the recession unfolded, and that was a very positive development for the stock market. The earlier cuts in the Discount and Federal Fund Rates were quite significant, as we reported first in mid Dec. and later in mid Jan. (see abstracts from prior reports below).

Triple Factor Bullishness (12/21/90)
... The Fed has succeeded in slowing the economy and is bringing inflation under control and continues the process of easing. ... the next four charts ... show what has happened in the past when the Fed has reduced the Fed Funds and also cut the Discount Rate. Over the past 40 years this twin condition has been very bullish for the market ... The third factor that is extremely bullish was the reduction in the reserve requirement. ... *we have experienced three factors over the past four weeks that have been historically very bullish for the stock market.*

Second Cut In Discount Rate Extremely Bullish
This week we prepared an analysis showing the implication of cuts in the Discount Rate on the stock market over the 41 year period from 1950-1991 (2&3). Reductions in the Discount Rate have historically been very bullish for the stock market. There have been 13 reductions in the Discount Rate over this period (excluding the most recent cuts), and the stock market has typically been much stronger 6, 9, and 12 months later.

History was again correct - the Federal Reserve loosened and stock prices soared as we felt would be the case (see p.7). When conditions looked particularly bad (i.e. budgetary problems, Gulf Coast War, and recession), the Fed eased (as inflation contacted) and the stock market sprinted forward 25-35 percent. Interestingly, the rapid gain of the stock market occurred when both the 4 year Presidential Election Pattern (4th qtr. 2nd yr. -1st qtr. 3rd yr.) and the Season Pattern in Stock Prices (Dec.- June) were both bullish. The 3rd cut in the Discount Rate is somewhat anti-climatic in that the big market action has already occurred, and problems are going to have to be resolved before the market can work its way much higher.

Research Continues

Last week we make the new Insiders' Buying Indicator a permanent part of the weekly report, and we believe it will help us determine when the stock market is becoming more or less attractive. This week we introduce an extended application of the models: Forecast Changes in the S&P 500 over Different Time Horizons (4, 8, 13, 26, & 39 week periods). (We hope to introduce a new bond model in the near future). For a few weeks, we will discuss how the models can be used as a fairly reliable tool for making market forecasts. The underlying tool of the asset allocation models is the return distribution. The models were designed having thigh returns when the values were large and low or negative returns when the model values were weak (see 10 - 1 return functions page 8-11). The matrices show that when the model values are rapidly increasing and strong (in the 6th through 10th decline), the market was rapidly increasing. It is particularly good for stocks when both the Bond and Reserve Models are advancing together and singularly (Tables on pp. 8-11). We have had such conditions over much of the past six months when the forecasted returns often ran 30-40 percent on an annualized basis for the different time horizons. Next week we will start presenting a table giving forecasts for different time horizons.

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology May 13, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models Unchanged: A-E All Negative - (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt) While F Very Strong - (Trend Following) (pp. 1-6). Even With Drop Of S&P 500 To 375, Market Still **Overvalued** And Believe Correction Could Continue.
2. Longer Term Liquidity Models Strong Due To Easing By Fed. Daily Models Range From 69-94 (p. 7) & Weekly Models From 73-94 (p. 10). Long Term Sequential Model (p.12) Strong, But Has Turned Down.
3. Daily & Weekly Portfolio Strategies Recommend 100% Of Maximum Equity Exposure (pp. 9 & 11).
4. 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 83-100 (pp. 13 & 15-17).
5. Fed Still Pursuing Easing Policy & Reserve Models Are Strong (pp. 10, 13, 14) - 3 Of 4 Are From 85-100.
6. Causal Models Weakened From Mid Week On And Were Largely Responsible For Friday's Sharp Correction. Market Still Overvalued & In Our Opinion Is Vulnerable Over Short Term (p. S1-11).
7. Special Studies: A. Fundamental Value Analysis (pp. 1-4). B. Presidential Election Review & Update (pp 5-9).

Poor Bond Auction (more band news possible) Makes Short Term Outlook Volatile - Caution Still Advised. Longer Outlook (i.e. moving towards Pres. Elect.) Remains Slightly Bullish.

Bond Market?

Uncertainty: Bond Managers tell me that one obtains about as many different forecasts regarding where the market is headed as the number of Bond specialists asked. Some bond forecasters are very optimistic, believing that the slow economy will send the 30 year Treasury Bond yield down to near 7.5 percent and bond prices up sharply. At the other extreme, there are those who believe that the 30 year Treasury bond yield bottomed a few weeks ago and is headed up to 8.5 percent or higher. Given the trade-off between investing in stocks and bonds, the answer to where the bond yield and price is headed is very important to the outlook for the stock market.

Poor Prospect: While we do not consider ourselves bond experts (1st bond model possibly introduced next week), we are economists and do understand the important relationship between demand and supply. The price paid normally increases when demand increases relative to supply. By all accounts, the demand for borrowing by the Treasury is going to soar over the next six months with the quarterly auctions (i.e. Aug. & Nov.) being records by a long margin. If the economy turns around (as employment nos. have indicated over past 2 weeks and as the Administration wants with the P.E. in 18 months), then interest rates are likely to increase with bond prices falling. In part what we are experiencing is the legacy of the 1980s of the Federal government living far beyond its means. In the short-run this was good for the economy and supported the 2nd longest expansion of the economy over the past 50 years. Now we are in the "hangover" period where we have to start paying the consequence of living beyond our means - this could mean higher interest rates than would otherwise have been the case.

4 Year Term

This week we have reproduced 5 charts regarding the progress of the stock market over the 4 year Presidential Election term from 1961 to the present. While not a perfect indicator of what is going to happen, there have been consistent changes over several terms in stock and bond prices. First, as can be observed from the chart on p. 5, the stock market has frequently bottomed in the 4th qtr of the 2nd year after the Pres. Elect. and then advanced sharply through the 1st qtr. of the 3rd year. This pattern was once again repeated this year with the S&P 500 up close to 25 percent over this six month period (when stock price advance is often the most rapid). By reviewing the chart one can also observe that the stock market did not decline over the 1st 1.75 years as is normal. Thus, we would not expect the advance over the last 2.25 years of the term to be as great as in the past. Additonally, observe from p.6 that the bond yield normally decreases from the 3rd qtr. of the 2nd year after the Pres. Elect. into the middle of the 2nd qtr. of the 3rd year (present qtr.). The reason for this is that the economy normally turns around during the 3rd year and as the economy expands the demand for bonds increases and the price falls. Additional charts are shown for the Fed Funds, 3 mon. T-Bill, and Discount Rate which also typically bottom and increase from this quarter on through the Presidential Election.

Return Matrices

MARKET COMMENTARY, **Stock Market Project, School of Management, Georgia Institute of Technology May 20, 1991 by Professor Fred Allvine**

Model Results

1. Valuation Models *Unchanged*: A-E All Negative - (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt) While F Very Strong - (Trend Following) (pp. 1-6). Even With Drop Of S&P 500 To 372, Market Still **Overvalued** And Believe Correction Could Continue.
2. Longer Term Liquidity Models Strong Due To Easing By Fed. Daily Models Range From 66-93 (p. 7) & Weekly Models From 69-94 (p. 10). Long Term Sequential Model (p.12) Strong, But Has Turned Down.
3. Daily & Weekly Portfolio Strategies Recommend 100% Of Maximum Equity Exposure (pp. 9 & 11).
4. 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 83-100 (pp. 13 & 15-17).
5. Fed Still Pursuing Easing Policy & Reserve Models Are Strong (pp. 10, 13, 14) - 3 Of 4 Are From 84-100.
6. Short Term Causal Models Weakening For 1.5 Weeks And Largely Responsible For Market's Slide. Market Still Overvalued And In Our Opinion Remains Vulnerable Over Short Term (p. S1-11).
7. Special Studies: A. *New Market Forecasts* (pp. 1-2). B. *Bond Model Introduced* (pp 3-5).

Large Treasury Auction Of T-Bills Makes Short Term Outlook Volatile - Caution Still Advised. Longer Outlook (i.e. moving towards Pres. Elect.) Remains Slightly Bullish.

Market Still Overvalued

Caution Still Advised: As the Cover of the Market Commentary shows, the market has gone *nowhere* the past 6 weeks, and is presently back to the level of early April. For almost this long, we have been warning that the market was becoming overvalued (for the short term), and that a correction was likely. This was while late comers to the Bull Market were calling for 3300 on the Dow and 400 on the S&P 500. Basically what has happened is that the market moved from an undervalued level in Oct. and Nov. 1990, as the liquidity models soared, to an overvalued level in April and May 1991, as the liquidity models contracted.

Considerations: The five Valuation Models are all negative and continue to suggest that the market is somewhat *overvalued* and that the correction could continue. Additionally, the "5" and "5" conditions still exist with the P.E. Ratio (S&P 500) at 18.1 being in the upper 5 percent of its range, with the Dividend Yield (S&P 500) at 3.24 percent being in the lower 5 percent of its range covering the past 17 years (since 1974). There is no denying that the inflation outlook is improving (currently running at a 2.5% rate with the year-over-year rate trending down to 4.9%), and this is a very positive background condition. However, the slow economy that is bringing inflation down is also hurting earnings, and forecasts for S&P 500 year over year earnings to climb to \$24.5 - \$25 from \$21.34 (Barron's this week) seem overly optimistic to us. Furthermore, as the economy strengthens to produce higher earnings, it is likely that inflation will also turn upward. We believe that some forecasters are "double discounting" future events (i.e. inflation decreasing with earnings growing), and that is why the market has been propelled into overvalued territory.

Shorter Term Market Forecasts

The primary orientation of the Stock Market Project to this point has been to develop long term models with time horizons of from 2 - 4 years. This week we start a new aspect of market modeling - forecasting likely changes in the S&P 500 over shorter time horizons (4, 8, 13, 26, & 39 wks). The shorter term forecasts are an outgrowth of the longer term models that are scaled from 0 - 100 and constructed from 20 years of weekly data (i.e. 1040 weeks) and daily data (i.e. 5200 days). The past two weeks we have shown you some return matrices with impressive returns when the model values are increasing and high (i.e 5-10 and rapidly increasing or possibly neutral). This week we have included two of the matrices for the 50 Series Bond and Reserve Models (pp 1&2). The return matrices were constructed from out of period data (1000 weeks through July 90) so we could see how good the forecasts were for the market advance since late last year. We have shaded the model values from mid Nov. 90 to the present. As can be observed, the model values were largely in the powerful left hand column and relatively high (5-10), and they forecasted annualized gains of 25-35 percent which was slightly less than the market achieved. The time horizon **forecasts** for this week are also shown in the matrices as the bold and italized numbers. The forecasted returns are down sharply from a few months ago and average 5.2 percent for the 50 Series Bond Model and 9.9 percent for the 50 Series Reserve Model.

New Bond Model

In the last few reports, we indicated that a Bond Model was imminent (it is something that I have personally worked on for sometime), and this week the Bond Model is introduced. The model is displayed in 3 different forms on pp. 3-5 (i.e Ryan excess return -Ryan less T-Bill yield, Bond Yield with multiple buy and sell signals, & Ryan Excess with 1st Buy and 1st Sell signals). The results speak for themselves (the past results are good), and we will go into more detail about the nature of the model in subsequent reports. (Another Bond Model may be introduced next week.) The new Bond Model (and the pending bond model) are still favorable regarding bonds (signals given some time ago). We will reserve our enthusiasm for the new Bond Model(s) until we see what happens to bonds over the next six months. If conditions change a model can given incorrect forecasts, and there is a possibility that conditions impacting the bond market may have in fact changed. Some of my colleagues (also my concern) have reservations regarding the health of the bond market due to the huge new issues of Treasury Bills, Notes, and Bonds expected over the next 6 months (see Cover). We believe that rates on longer term Treasury issues may have to increase (bond prices fall) to clear the market (i.e. demand does influence price on longer term issues). If this is true the bond market could deteriorate over the next six months (more discussion in future).

Model Results

1. Valuation Models *Unchanged*: A-E All Negative - (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt) While F Remains Strong - (Trend Following) (pp. 1-6). Indicators Suggest That S&P Remains Somewhat **Overvalued** And Market Could Remain Volatile.
2. Longer Term Liquidity Models Strong, But Slowly Deteriorating. Daily Models Range From 67-93 (p. 7) & Weekly Models From 66-94 (p. 10). Long Term Sequential Model (p.12) Strong, But Has Turned Down.
3. Daily & Weekly Portfolio Strategies Recommend 100% Of Maximum Equity Exposure (pp. 9 & 11).
4. 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 83-100 (pp. 13 & 15-17).
5. Fed Still Pursuing Easing Policy & Reserve Models Are Strong (pp. 10, 13, 14) - 3 Of 4 Are From 82-100.
6. Short Term Causal Models Improved And Largely Responsible For Recent Market Advance. Direction, Thrust, & Distribution Weakening. Synthetic Bond Index Weak, While Raw Material A&B Favorable (pp.S1-11).
7. Special Studies: A. *Market Forecasts* & 3-D Charts (pp. 1-6). B. New *Bond Model* (pp. 7-9).

Short Run Expect Market To Be Volatile - Move From Low To High Side Of Trading Range. Longer Outlook (i.e. moving to Pres. Elect.) Slightly Bullish (models strong, but weakening).

Short Term Cautious Outlook

Little has changed from last week regarding the market fundamentals, and we see no reason to change our view that the market could swing widely in the trading range traced-out over the past 7 weeks. The market advanced very rapidly (almost 30 percent) from its Oct. low to the April high. Given that the market did not contract nearly as far during this recessions as in the past - P.E. only fell to 14 in Oct versus 7.5 during prior 3 recessions - the potential for advance is limited (not the 70 - 80 percent some have talked about).

The 5 Valuation Models remain somewhat negative, and this is due to the market being relatively high at this time. The "5" and "5" conditions still exist: (1) the P.E. Ratio (S&P 500) is near the upper 5 percent of its range; and conversely, (2) the Dividend Yield (S&P 500) is near the lower 5 percent of its range (covering the past 17 years - since 1974). Clearly the inflation outlook has improved and this is positive for the stock market. However, the slow economy is hurting business, and this is leading to downward revisions of earnings forecasts.

Forecast For Short Time Horizons

Matrix Analysis: As explained last week, the primary orientation of the Stock Market Project has been to develop longer term models with time horizons of from 2 - 4 years for the primary purpose of allocating assets between the S&P 500 and T-Bills. Now we have started a new and exciting aspect of market modeling involving forecasting changes in the S&P 500 over shorter time horizons (4, 8, 13, 26, & 39 wks). The shorter term forecasts are an outgrowth of the longer term models that are scaled from 0 - 100 and constructed from 20 years of weekly data (i.e. 1040 weeks) and daily data (i.e. 5200 days). The past two weeks we have shown you some return matrices with impressive returns when the model values are increasing and high (pp. 5-6). We have shaded the model values from mid Nov. 90 to the present. As can be observed, the model values were largely in the powerful left hand column and relatively high (5-10), and they forecasted annualized gains of 25-35 percent which was slightly less than the market achieved. The time horizon **forecasts** for this week are also shown in the matrices as the bold and italicized numbers. The forecasted returns are down sharply from a few months ago and average (for the 5 time horizons) 10 percent for the 50 Series Reserve Model and 4.5 percent for the Long Term 50 Series Model.

3-D Charts: To more dramatically demonstrate the implications of the return matrices, we decided to construct 3-D plots showing how the returns vary depending on the changes and the level of the 50 Series Reserve and Long Term Models. We are very impressed with the results of the 50 Series Reserve Model. As can be observed from the chart (see cover and p.1), the 26 week return of the S&P 500 was consistently high when the model values were from 3 to 9 and increasing. The returns were good, but not quite as strong, when the Reserve model was strong (i.e. 7-10) but not increasing. (See results of 50 Series Reserve Model on pp. 13 a&b.) The remainder of the time (i.e. when model values low or decreasing) the market experienced little or no gain. The 3-D plot of the 13 week horizon for the 50 Series Reserve Model shows (p.2) the same relationship, but is a little more dramatic in terms of concentrating the higher and lower returns. 3-D charts are also shown for the Long Term 50 Series Model for the 13 and 26 week horizons (pp. 3-4), and once again the return are strong and concentrated when the model values are increasing and high. Conversely, they are poor when the model values are decreasing and low. (See results of Long Term 50 Series Model on p. 16.) We believe that the short term forecasts can be useful in deciding when to make heavier commitments to stocks, and for strategies using futures to enhance returns. To further concentrate returns, we are starting research using three directional matrices and the results will be reported to you in the future.

New Bond Model

Last week we introduced our first long term bond forecasting model and the results are presented on pp. 7-9. The model is displayed in 3 different forms: Ryan excess return - Ryan less T-Bill yield, Bond Yield with multiple buy and sell signals, and Ryan Excess with 1st Buy and 1st Sell signals. The Bond Model is deteriorating and if the trends continue, the buy signal could change to sell relatively soon.

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology June 3, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models *More Overvalued:* A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt) While F Very Strong - (Trend Following) (pp. 1-6). While Market May Go Higher, It Is Overvalued And Quite Vulnerable - CAUTION ADVISED.
2. Longer Term Liquidity Models Fairly Strong Due To Easing By Fed. Daily Models Range From 66-93 (p. 7) & Weekly Models From 66-93 (p. 10). Long Term Sequential Model (p.12) Strong, But Has Turned Down.
3. Daily & Weekly Portfolio Strategies Recommend 100% Of Maximum Equity Exposure (pp. 9 & 11).
4. 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 83-100 (pp. 13 & 15-17).
5. Fed Easing Policy Makes For Strong Reserve Models (pp. 10, 13, 14) - 3 Of 4 Are From 80-99.
6. Short Term Causal Models Improving (but low) For 2 Weeks And Have Spurred Market To New High. However, **Divergence Model** EXTREMELY NEGATIVE Suggesting Market Is Considerably Overvalued (same conclusion as Valuation Models) (p. S1-11).
7. Special Studies: A. *New Market Forecasts* (pp. 1-6). B. *Fundamental Value Analysis* (pp 7-10).

Short Term Outlook Is Extreme Caution Since Market Overvalued On Several Measures. Longer Outlook (i.e. moving towards Pres. Elect.) Continues To Be Slightly Bullish.

Divergence Model Warning

Explanation: One of our interesting and more complex models is based on Divergence between the short term causal models and price change (pp. S10&12). Positive Divergence occurs when the market is decreasing while the short term causal models are improving. Divergence numbers are considered "good" from 70-90 and "strong" from 90-100. When Divergence is from 70-100, the market is likely oversold and will soon rebound. Conversely, Negative Divergence occurs when the market is increasing while the short term causal models are decreasing. Divergence numbers are considered poor from 10-30 and bad from 0-10.
Extreme Level: While the short term causal models (pp. S10&12) have improved over the past two weeks, they remain relatively weak. In contrast, the S&P 500 has increased by approximately 5 percent increase over the past two weeks. This development has led to the Divergence Model plunging to the low level of 1 on a 100 point scale. Several major market corrections have been associated with such low readings and they include Oct. 1987, Oct. 1989, Jan. 1990, and July 1990. The five Valuation Models (pp. 1-5) all suggest that the market is overvalued and provide an independent confirmation that the stock market is very pricey.
Model Extensions: We believe the Divergence Model has considerable potential in your investment strategies for short term timing purposes, and we have prepared 3 extensions of the model for your consideration (see Cover and pp. S13 a-c). The 1st special chart extends the Divergence data back another year so we can see what happened during the 2nd half of 89 and the 1st half of 90 (p. S13a). Very negative Divergence was recorded before the Aug. and Sep. 89 corrections and the Jan. 90 correction - mkt. had become overvalued and vulnerable and sharply corrected as expected. Divergence is smoothed in the 2nd special chart to help identify the major patterns (p. S13b). As can be observed, when Divergence is high the market very often advances and when it is low the market frequently declines. The Divergence and Causal Models are combined in the 3rd special chart. It is often particularly bullish when both the Divergence and Causal Models are strong.

Fundamental Value?

As the market has rallied over the past 6 months (6 most powerful months for the stock market over the 4 year Pres. Elect.), and with substantial gains in many portfolios, it is prudent to protect that value if the market is becoming overvalued. As discussed in 1. above, all five of the Valuation Models suggest that the market has become overvalued and is vulnerable. In addition, we are repeating 4 charts presented periodically that further explore the question of Value. The first chart (p. 7) suggests that the current P.E. is justified by a 3 percent CPI, while most of the forecasts we have reviewed suggest CPI to be from 4.5-5 percent in the 2nd half of 91 and on into 1992. We believe as others do that as the economy improves, there will be increased wage and price pressures. The next two charts (pp. 8&9) show that conditions have changed to "4" and "4" (P.E. in upper 4% of its range while the dividend is in the lower 4% of its range covering the past 17 years) as the market has advanced with the S&P 500 P.E. ratio up to 18.56 and the dividend down to 3.13 percent. Finally, it can be observed that most of the market advance since late 88 is due to a P.E. expansion of 50% - 12-18.

Time Forecasts

Last week we explained the power of the new 3-dimensional analysis that uses both the level and the change of the 50 Series Reserve and Long Term Liquidity Models to forecast the stock market for 4, 8, 13, 26, & 39 week horizons. The charts and forecasts are presented on the next 6 pages (pp 1-6), and they remain unchanged for the prior week. The forecasted returns are down sharply from a few months ago and average 10% for the Reserve Model and 4.5% for the Long Term 50 Series Models. These models do not consider value.

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology June 10, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models *Remain Overvalued:* A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Trend Following F Model Still Very Strong (but turning down) (pp. 1-6). Given Poor Bond Market, Stock Market Remains Quite Vulnerable.
2. Longer Term Liquidity Models Deteriorated This Week. Daily Models Range From 64-90 (p. 7) & Weekly Models From 58-89 (p. 10). High Return Long Term Model Weakening (p.12).
3. Daily & Weekly Portfolio Strategies Recommend 100% Of Maximum Equity Exposure (pp. 9 & 11).
4. 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 83-99 (pp. 13 & 15-17).
5. Fed Easing Policy Contributes To Strong Reserve Models (pp. 10, 13, 14) - 3 Of 4 Are From 79-99.
6. Short Term Causal Models Turned Down Sharply As S&P Tried To Make New High. **Divergence Model** (featured last week) Suggests Market Is Overvalued (same conclusion as Valuation Models) (p.S1-11).
7. Special Studies: Interest Rate Matrix (p.1), P.E.Analysis (pp.2&3), and Interest Rates - 4 Yr.Term (pp.5-8).

Short Term Outlook Remains Cautious Since Market Overvalued On Several Measures. Longer Outlook (i.e. moving towards Pres. Elect.) Continues To Be Slightly Bullish.

Divergence Model Update

Explanation: Last week we explained that one of our more interesting and complex models is based on Divergence between the short term causal models and price change (pp. S11A-C). Strong Positive Divergence (i.e. 70-100) occurs when the market is decreasing while the short term causal models are improving. In contrast, Poor Divergence occurs when the market is increasing as the short term causal models are decreasing.

Extreme Level: We reported last week (on cover of Commentary) that Divergence had fallen to below 1, and was at a level from which major corrections had occurred in the past - Oct. 1987, Oct. 1989, Jan. 1990, and July 1990. While the Divergence Model has improved, it is still quite negative and suggests the correction could continue.

Model Extensions: The Divergence Model provides important insights into when the market is under or over valued and can be expected to rapidly change directions (like last week). We are making two extensions of the Divergence Model a regular part of the weekly report. Under or over valued conditions may be easier to observe by smoothing the Divergence Model with a 10 day exponential moving average and then rescaling as shown on page S11B. Rapid changes often occur when both the Divergence and Causal Models are moving in the same direction, and the Combination of the Divergence and Causal Models is presented on page S11C.

Fundamental Value?

As stocks rallied over the past 6 months (6 most powerful months for the stock market over the 4 year Pres. Elect.), the market moved from being under to over valued. All five of the Valuation Models now suggest that the market is overvalued. Further indicating the market is pricey are the "5" and "5" conditions - P.E. in upper 5% of its range and dividend in lower 5% of its range covering the past 17 years since 1974.

Time Forecasts

We are very enthusiastic about the new 3-dimensional analysis that uses both the level and the change of the 50 Series Reserve and Long Term Liquidity Models to forecast the stock market for 4, 8, 13, 26, & 39 week horizons. As shown in the 3-D charts the last three weeks, high returns can be concentrated in certain time periods (i.e. 80% of market gain in 33 percent of time) The forecasted returns did not change this week and remain 10% for the Reserve Model and 4.5% for the Long Term 50 Series Models - down sharply from a few months ago. However, it should be recalled that these models do not consider value, and when value is factored in the outlook for the next few months is poor.

Direction 30 Year Bond Yield

One of the most hotly debated questions in recent months is "where is the long bond yield headed". Last Friday the 30 year bond yield increased to 8.47 percent - its highest level since last November. A Matrix which can be used to estimate the yield of the 30 year Treasury Bond is presented on the next page (p.1). The analysis takes into consideration both the Inflation Rate (CPI) and the Bond Yield Premium (above the CPI). We believe the CPI will range from 3.5-5.0 percent over the next two years and that the Bond Yield Premium will range from 4.0-4.5 percent. This means the 30 year T-Bond Yield will range from 7.5 to 9.5 percent. While there are those who are very optimistic about inflation and see it falling sharply, many other forecasting organizations place the year-end inflation rate at 4-5 percent. If the year end CPI is 4.5% and the premium 4% the long term bond yield should be near 8.5 percent - close to its present level. For a few months the inflation rate could be lower, but we expect rates to increase as the economy recovers. The upward pressure on both short rates (i.e. T-Bll and Fed Funds) and the 30 year Treasury Bond Yield as the economy expands can be observed from the 4 year Presidential Election Term study reviewed again this week (pp 3-7). We believe the stock market advanced too fast and became overvalued due to market analysts projecting both improved earnings and falling inflation. When the economy expands earnings are likely to improve, but so is inflation which means higher interest rates. As inflation increases and rates go up the Price Earnings ratio decreases (see pp. 2&3).

MARKET COMMENTARY, **Stock Market Project, School of Management, Georgia Institute of Technology June 17, 1991 by Professor Fred Allvine**

Model Results

1. Valuation Models Based On Last 10 Years Relationships Continue To Suggest Market Is *Overvalued:* A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Trend Following F Model Still Strong, But turning down (pp. 1-6). Advise Caution.
2. Longer Term Liquidity Models Sharply Deteriorated This Week. Daily Models Range From 54-88 (p. 7) & Weekly Models From 53-86 (p. 10). High Return Long Term Liquidity Model Weakening (p.12).
3. Daily & Weekly Portfolio Strategies Still Recommend 100% Of Maximum Equity Exposure (pp. 9 & 11).
4. 50 Series Interm. Horizon Models Strong, But Turning Down. Models Range From 82-97 (pp.13 & 15-17).
5. Fed Easing Has Contributed To Strong Reserve Models (pp. 10, 13, 14) – 3 Of 4 Models Range From 72-97.
6. Short Term Causal Models Turned Down Sharply As S&P Tried To Make New High. **Divergence Model** (discussed last 2 weeks) Is Neutral After Being Way Overvalued. Fast Causal Turned Up On Friday & If Follows Through S&P 500 Could Climb To Top Of Its Range.
7. Special Study: Change In Interest Rates & Stock Prices Following Recessions & Longer Term Market Outlook.

Short Term Outlook Shows Signs Of Improving, And Could Push S&P 500 To Top Of Range. Longer Outlook (i.e. moving towards Pres. Elect.) Continues To Be Slightly Bullish (same).

Why Cautious?

Valuation: As discussed above, all 5 of the Valuation Models suggest that the market is somewhat overvalued which makes the market subject to rapid change. In addition, the "5" and "5" (P.E. in upper 5% of its range while the dividend is in the lower 5% of its range covering the past 17 years) conditions exist which further suggest the market is pricey. The 3 factors which our studies indicate drive the stock market, in order of importance, are: 1. inflation outlook (likely to improve in short run - through year end, but not much improvement foreseen over longer term - 92 & 93), 2. prospects for earnings (should gradually improve as economy turns around), and 3. stock buyer optimism (fairly strong). However, just because the market is somewhat overvalued does not necessarily mean that it won't climb higher, and become more overvalued as happened in Oct. 87 and in July 90.

Liquidity Models: Another reason we are cautious is that not only are the Valuation Models weak, but in addition many of the longer term liquidity models (constructed from different maturity interest rates) have turned down sharply. When the longer term liquidity models lose their momentum, the short term market outlook is often poor (more on this next week). Given the weakness of the longer term liquidity models, we believe the stock market would have contracted more sharply had it not been for the strength of basic Raw Material Models A & B (pp. S7&8).

Trading Range: We do not believe the turn-up on Friday represents the beginning of a legitimate new thrust upward. Rather it seems to us to be the market churning so often associated with periods of uncertainty when the market is awaiting the development of important new economic data such as inflation (which was fairly good last week) and recovery from the recession (increasing amount of data suggesting that the economy has bottomed and is close to turning up). At the end of the report, we discuss the impact of recovery from recessions on the bond and stock markets.

Time Forecasts

We remain enthusiastic about the new 3-dimensional analysis that uses both the level and the change of the 50 Series Reserve and Long Term Liquidity Models to forecast the stock market for 4, 8, 13, 26, & 39 week horizons. The forecasted returns did not change this week and remains at 10% for the Reserve Model and 4.5% for the Long Term 50 Series Models – down sharply from a few months ago. Next week we plan to spend more time on this subject.

What If The Recession Is Over?

Overview: We have been asked by a sponsor "what the end of the recession is likely to mean for the bond and stock markets?". This week we did an extensive study of the question, and made the assumption that the current recession ended in May. We found the results quite interesting – first it contributed to our becoming more optimistic regarding the outlook for the stock market, but towards the end of our analysis we uncovered some disturbing relationships that set us back. The 9 charts/tables tell the story (see order on next page), and hence we will only summarize the findings.

Findings: Regarding interest rates (the 30 year T-Bond – p.1, 7 year T-Note - p.2, & 3 mon. T-Bill - p.3), the analysis showed that rates generally increase following recessions (6 & 12 months) with the increase becoming greater as one moves from longer to shorter maturities (see table p 9). The 4th chart shows that the P.E. Ratio tends to turn up sharply towards the end of the recession as inflation abates. The 5th and 6th charts show that the S&P 500 generally increases over the first 6 & 12 months following recessions – 23.4% (annual rate) over first 6 month and 15.3% over the 12 months (most rapid gain over 1st 6 months after recession – see table on p. 9). We thought this was great news, but then found that the P.E. Ratio presently is considerably higher than it was at the end of the prior 7 recessions, and instead was near the peak level from 69 to 72. In other words, we can not expect the P.E. Ratio to climb following the recession and drive stock prices higher as has been the case following the last 7 recessions.

High P.E.: We believe the high P.E. is due to the Soft Landing Program of the Fed and that the market actually bottomed during 1988 when the P.E. fell to 12 – its now high in our opinion at 18+ (more on this next week). The 8th chart shows the yield of the 30 yr. T-Bond in relation to recessions. As the comments explain, we believe the yield of the 30 year bond is stuck in the range of 8-9 percent and is not likely to improve much. If this is actually the case, then bond yields are not going to fall and help the stock market to advance. Furthermore, we are concerned regarding the longer term health of the economy, and do not believe conditions exist that support a bullish outlook for the stock market (doing a new book to be entitled something like "Wake-up America – Your Economy Is Burning") that explains our concern regarding the future.

Model Results

1. Valuation Models *Still Overvalued:* A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Trend Following F Model Strong, But Turning Down. (pp. 1-6).
2. Longer Term Liquidity Models Deteriorated Rapidly Last Week. Daily Models Range From 47-87 (p. 7) & Weekly Models From 51-85 (p. 10). High Return Long Term Liquidity Model Weakening (p.12).
3. Daily & Weekly Portfolio Strategies Recommend 100% Of Maximum Equity Exposure (pp. 9 & 11).
4. 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 81-96 (pp. 13 & 15-17).
5. Fed Easing Policy Contributes To Strong Reserve Models (pp. 10, 13, 14) - 3 Of 4 Are From 67-96.
6. Short Term Causal Models Turned Down 3 Weeks Ago As Market Topped, But Have Recently Turned Up From Very Low Level. **Divergence Model** Improving As Market Contracts & Is Neutral To Slightly Weak. Suggests Market Is Slightly Overvalued (p.S9-13).
7. Special Studies: Longer Term Outlook (p.1) And 3-D Models And Return Matrix (a repeat).

Short Term Outlook Remains Cautious Since Market Overvalued On Several Measures. Longer Outlook (i.e. moving towards Pres. Elect.) Continues To Be Slightly Bullish.

Market Outlook?

Range Of Opinions: A most challenging question at this time is where the stock market is headed. The optimists see the Dow climbing to 3500 - 4000 over the next couple of years, while the pessimists believe that the Dow could fall to 2000 - 2500. If inflation falls to 3-3.5 percent, bonds hold in the 8-8.5 percent range, and earnings turn up, then the optimists are likely to be correct. However, if inflation stays in the 4-5 percent range, bond yields climb to 9 percent or higher, and earnings only improve slightly, then the pessimists are likely to be nearly correct. Economists frequently write that the recovery from this recession is going to be different from those in the past. Recovery is expected to be slower than in the past, and some economists even suggest that there will be a short term recovery and then the economy will slide back into recession.

Things Are Different: While there are the alarmists who regularly suggest that things are different this time around, the fact is that there are a number of things that are different in the economy and stock market that will affect the future course of events. In the special report last week, we noted that the P.E. was much higher than was the case at the end of the seven prior recessions. One reason for this was the Soft Landing Program of the Federal Reserve which drove interest rates up from March 88 to March 89. The Soft Landing Program did achieve its objective for a while of slowing the economy and the rate of inflation. While inflation rose to its highest level in 1990 since 1982, it was only up a net 2 percent (from 4+ to 6+). Furthermore, the early action taken by the Fed permitted the economy to expand into mid 1990. Had it not been for Iraq invading Kuwait, the economy might not have slipped into recession and kept on growing at a slow, low inflationary pace. Another thing different about this recession is that it occurs at the end of the 2nd longest expansion of the economy since World War II. A lot of excess occurred because of the long expansion. In addition, the policies of the Administration led to rapid expansion of debt in all sectors of the economy (i.e. government, business, & public).

A Debt Driven Boom: In reality, the boom of the last 8 years was underwritten by rapid expansion of debt. When a society incurs debt so rapidly, it is in essence borrowing from the future. Eventually, the burden of excessive debt expansion becomes apparent, as is now the case. The Federal government is going to have to sell $200+ billion dollars of new debt over the next 6 months. In addition, the RTC told Congress last week that it needs $80 billion dollars to continue its rescue of the bankrupt savings and loan business. While we may be dead wrong, we believe that all the debt that will have to be sold will put upward pressure on interest rates (since the credit worthiness of the U.S. has greatly diminished), and this will be bad for the stock market. If rates climb much further, the tension that is being created could cause the stock market to rapidly decline.

Direction Of S&P 500: We not only believe that things are different regarding the economy, but also regarding the stock market. As shown on the cover, the stock market increased at its most rapid rate during the debt driven expansion of the economy from 82 to 91. Also, because of the Soft Landing Program of the Fed (which slowed the economy and the rate at which inflation grew), the stock market is carrying its highest P.E. at the end of the eighth recovery from recession over the past 40 years. In other words, the P.E. is very high for this stage of the business cycle. If the excessive level of debt carries the burden that we believe, the outlook for interest rates and the rebound of the economy is not very good. Unfortunately, our view of the economy (given the research we are doing for a new book) is not that good for the next 5-10 years – on into the decade of the 1990s. For this reason, we believe the upside potential for the stock market is limited, and that the stock market could be quite volatile. The Administration is going to do everything in its power to get the economy moving before the next Presidential Election, and that is why we are somewhat optimistic about the stock market through 1992.

Time Forecasts

We remain enthusiastic regarding the potential of the new 3-dimensional analysis that uses both the level and the change of the 50 Series Reserve and Long Term Liquidity Models to forecast the stock market for 4, 8, 13, 26, & 39 week horizons. Charts showing the concentration of returns when the models are rapidly increasing or high are presented on the next few pages. The forecasted returns have not changed over the last few weeks and remain 10% for the Reserve Model and 4.5% for the Long Term 50 Series Models. However, it should be recalled that these models do not consider value.

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology July 1, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models Suggest *Market Still Overvalued:* A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Trend Following F Model Strong, But Turning Down After Sharp Advance. Trend Model Often Recovers After Market Consolidates And Leads Market Higher (may not due to high market valuation & economic problems (pp. 1-6).
2. Longer Term Liquidity Models Continued To Deteriorate Last Week. Daily Models Range From 46-85 (p. 7) & Weekly Models From 47-83 (p. 10). High Return Long Term Liquidity Model Weakening (p.12).
3. Portfolio Strategies Still Recommend 100% Of Maximum Equity Exposure As Mkt. Consolidates (pp. 9 & 11).
4. 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 79-95 (pp. 13 & 15-17).
5. Fed Easing Contributes To Strong Reserve Models (pp. 10, 13, 14) - 3 Of 4 Are From 63-94.
6. Short Term Causal Models Bottomed & Turned Up From Low Level Last Few Days. If Continues Could Stop Market Decline. **Divergence Model** Becoming Strong As Market Contracts & Suggests Market Approaching A Bottom (pp.S13-A&B), But Divergence Remains Weak When Causal Model Considered (p. 13C).
7. Special Studies: S&P To Lower End Of Trading Range & Return Matrix Different Time Horizons (next 6 pp.).

Short Term Outlook Remains Cautious Since Market Overvalued On Several Measures. Longer Term (i.e. moving to Pres. Elect.) Slightly Bullish - Expecting Economy To Improve.

Trading Range Market

Reason For Sideways Market: For the past two months, we have been advising caution over the short run, while believing the prospect for next 1.5 years is slightly bullish as we move to the Nov. 92 Presidential Election (market often tops within a few months of Pres. Elec. given stimulation of economy to attract swing voters before the election). We repeated the Cover of the Market Commentary for the 3rd time suggesting that the "market is moving in a trading range" - now to the bottom of the range (as shown). The market advanced rapidly for six months from Oct. 90 - Apr. 91 (or for 3 months from Jan. - Apr. 91). At the beginning of the expansion the market was Undervalued with all the Valuation Models being either positive or neutral. Then as the Liquidity & Reserve Models improved during the final qtr.. of 1990, the market rapidly advanced which is common for this 6 month period of four year Presidential Election Term. (Most rapid advance often occurs over 6 months from beginning 4th qtr. of 2nd yr. after P.E. through 1st qtr. 3rd yr. - period just completed.) In contrast, over the past 2 months the Valuation Models have all become negative suggesting that the market has become overvalued based on historical relationships. In addition, the Liquidity Models after advancing for six months have peaked and turned down over the past 6 months.

Moving Out Of Trading Range: The Liquidity Models are now moving from a high level into the middle of their range which is an indication of a sideways market. If the Liquidity Model were to substantially improve, the sideways forecast would change to a positive outlook for the market. On the other hand, should the Liquidity Models further deteriorate the forecast would be for the market to turn downward out of its trading range. It will take some positive or negative news to move the market in one direction or the other. Good news would be that (1) inflation continues to contract even as the economy starts to recover and (2) corporate earnings start to improve. Bad news for the market would include (1) bond yields increase from 8.5 to 9 percent due to the huge amount of borrowing by the Federal Government (estimated to be 1 billion a day for several months) and (2) the economy experiences a "double dip" (improves for 1-2 qtrs. and then declines again) and earnings show little improvement.

Things Are Different

We would rather be positive and suggest that the economy will experience a satisfactory recovery from the recession, but that is Far From A Certainty. There are a number of reasons to be concerned over the health of the economic recovery. The most serious problem we face as a country is that the U.S. has become a Debtor Economy. Most sectors of the economy increased their relative borrowing - consumers, businesses, and local, state, and Federal governments - over the past 10 years. We believe the high level of borrowing created a false sense of prosperity over the past 10 years - to a certain extent it meant that we borrowed from the future. Now we are commencing to experience the negative consequences of the "borrowed economy". To sell increasing quantities of debt means that interest rates must rise since the credit worthiness of the system is deteriorating. Higher interest rates could contribute to the economy slowly after a brief recovery from the recession. Furthermore, consumer who account for two thirds of our GNP are close to being "borrowed out", and as their incomes slowly rise they may use the increase to pay down their debt rather than to buy more goods and services. Finally, government at all levels are finding it necessary to reduce their outlays due to growing deficits, and this also could contribute to slowing or even stopping the recovery.

Time Forecasts

The time horizon (4, 8, 13, 26, & 39 horizons) analyses and forecasts are presented in the next 6 pages. While the forecasted returns of the Reserve Model remains unchanged at 10% (an average of the 5 time horizons), the Long Term 50 Series Reserve Model has deteriorated with the forecasted return becoming -1%. The low or negative nature of these forecasts, compared to the high forecasts 4 to 8 months earlier, is another reason for our negative short term outlook.

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology July 8, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models Still Suggest *Market Overvalued:* A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Trend Following F Model Strong, But Turning Down After Major Advance. Trend Model Often Recovers After Market Consolidates And Leads Market Still Higher (may not happen this time due to high P.E. at end of recession).
2. Longer Term Liquidity Models Continued To Gradually Decline Last Week. Daily Models Range From 46-84 (p. 7) & Weekly Models From 48-81 (p. 10). High Return Long Term Liquidity Model Weakening (p.12).
3. Portfolio Strategies Still Recommend 100% Of Maximum Equity Exposure As Mkt. Consolidates (pp. 9 & 11).
4. 50 Series Intermediate Horizon Models Are Strong & Recommend A Heavy Exposure To Equities. Models Range From 77-95 (pp. 13 & 15-17). However, Models Could Rapidly Fall If Conditions Further Deteriorate.
5. Fed Easing Contributes To Strong Reserve Models (pp. 10, 13, 14) - 3 Of 4 Are From 52-93.
6. Short Term Models: Causal Models Have Turned Up From Low Level, While Longer Term Direction Models Continue To Decline. Divergence Models (p. 13 & 13b) Are Slightly Positive, But The Combination Of Divergence And Causal (p. 13c) Remains Weak. Conditions Represent Somewhat Of A Stand-off.

Short Term Outlook Remains Cautious Since Market Overvalued On Several Measures. Longer Term (i.e. moving to Pres. Elect.) Slightly Bullish - Expecting Economy To Improve.

Keys To Stock Market: Liquidity & Valuation

Recent Past: We believe that using both our Liquidity Models (derived from interest rates, money supply, and reserves) and our Valuation Models (compare level of stock market to other economic and financial variables) one obtains a fairly good appreciation of the Direction of the Stock Market. For example, during the final quarter of last year the Valuation Models were very strong (suggesting that the market was undervalued - selling had gone too far) and the Liquidity Models started to rapidly improve. These two conditions – unvalued market and rapidly improving liquidity models – set the stage for the beginning of a sharp market advance. The market advanced rapidly during the first quarter of 1992 since the Valuation Models were positive and the Liquidity Models were rapidly improving. However, during the 2nd quarter of this year, the Liquidity Models topped and turned down to a neutral level, while the Valuation Models became negative indicating that the market had become overvalued. The neutral level of the Liquidity Models (i.e. declining while still averaging above 50) and the overvalued condition of the Liquidity Models suggested to us that the market would probably fluctuate in a trading range which it has for the past 3 months.

Current Position: At this time, the market appears to be fluctuating in the lower end of its trading range (see Market At A Glance on p. S2) taking some cheer from the fact that the recession seems to have bottomed, but not liking the upward pressure on longer term interest rates. We believe later this year (after a possible further correction of the stock market) that there is a good possibility of the market starting an advance that will continue through much of next year (and the Presidential Election) and carry the market somewhat above its recent highs (5-10 percent). Improved earnings will be the positive factor driving prices higher, while rising prices (and higher interest rates) are likely to hold the market back.

Seasonality & Energy

Seasonality: As shown on the Cover of the Market Commentary, there has been a strong seasonal tendency in stock prices since 1985. In 6 of the last 7 years, the stock market has advanced sharply over the first half of the year (sometimes the advance starts during the last quarter of the prior year). The worst period of the year has consistently been the 3rd quarter of the year - the quarter we are now entering. As noted on the chart, one reason for the seasonal pattern is that the economy often expands rapidly during the busy summer quarter of the year and this puts upward pressure on inflation and interest rates.

Energy: Another reason the 3rd quarter is often bad is that energy demand is strong and energy prices frequently increase. Over the last few days, the Raw Material Index "B" (see p. S8), which measures energy prices, has rapidly decreased (index inverted). If this Index continues to deteriorate (fall) like it has during the past 2 Julys, it could exert downward pressure on stock prices. On the positive side is the fact that many of the world economies are slow so energy demand is not increasing very rapidly. However, on the negative side is the fact that there is only limited production coming from the Kuwait and Iraq oil fields. As a result, there is some concern that demand may exceed supply later this year which could force energy prices to rise sharply.

Time Forecasts

The market forecasts for different time horizons (4, 8, 13, 26, & 39 horizons) from the 3 Dimensional Analysis were unchanged this week. The average forecast for the Reserve Model is 10% (an average of the 5 time horizons), while the forecast for the Long Term Liquidity Model is -1%. In contrast, a few months ago the forecast of these models was for annual gains of 25-35 percent.

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MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology July 15, 1991 by Professor Fred Allvine

Changes In Model Values Over Last 7 Months

As shown on the Cover, the S&P 500 has moved to the middle of its range covering last three months. We believe that the S&P 500 stalled-out for good reasons after advancing 25% from Oct. 90 - Mar. 91. In Oct. 90, conditions were right for a major market advance – Valuation Models were all positive suggesting that the market was undervalued (i.e. weak hands had sold their stock) and the Liquidity Models started to rapidly advance (i.e. Fed was adding liquidity & interest rates were falling). The Asset Allocation Models (daily and weekly models) recommended making the maximum commitment to equities (pp. 9&11) before the end of 1990. However, conditions had changed by Mar. 91. About three months ago, all the Valuation Models switched from being positive to negative, and now suggest that the stock market has become somewhat overvalued, and several of the Liquidity Models have fallen from the top of their range (bullish) to slightly below their mid point (neutral), but do not yet recommend lower stock holdings. The dual conditions (weak Valuation Models and deteriorating Liquidity Models) led us to believe that the stock market had become overvalued, and would move in a trading range for the time being as has been the case. Furthermore, given the "pricey" level of the market (P.E. ratio for S&P 500 is now in the upper 5% of its range of the past 17 years, while the S&P 500 dividend yield is near the lower 5% of its range), we have been advising Caution regarding the short run outlook (next three months). We believe that the stock market is waiting for strong evidence one way or the other regarding whether the economic fundamentals are going to improve, be little changed, or fall.

Model Details

1. Valuation Models A-E <u>All Negative</u> (Stock Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt Yield). However, Longer Trend Following F Model Still <u>Strong</u>, But Turning Down. (pp. 1-6).
2. Several Of The Long Time Horizon Liquidity Models (pp. 6-12) Deteriorated Again Last Week. Excluding The 2 Short Term Models, The Other 6 Models Now Average Only 46 (on a 100 pt. scale). The 2 Short Term Models (designed from short term rates) Are Now Slightly Above 80, But We Do Not Believe These Models Are Nearly As Important As They Used To Be (before Soft Landing Pgm.). (See comments on last chart p. 17) High Return Long Term Weekly Liquidity Model Continues To Recommend Stocks, But Is Weakening (p.12).
3. Daily & Weekly Portfolio Strategies Recommend 100% Of Maximum Equity Exposure (pp. 9 & 11), But Could Start Recommending Lower Equity Positions If Model Continues To Decline.
4. 50 Series <u>Intermediate</u> Horizon Models Are Strong But Declining & Range From 76-94 (pp. 13 & 15-17).
5. Fed Is No Longer Trying To Push Rates Down And 3 Of The Reserve Models Are Below 50 (pp. 10&14).
6. Short Term Causal Models and Technical (Direction, Thrust, & Distribution) Have Turned Up From Low Level, But Are Fairly Weak As Has Been Market Advance (pp. S9-12). Divergence Model, After Signaling Top & Becoming Strong Before Rally (pp. S13a-c), Ranges From 30-40 - Not Level To Expect Mkt. Advance.
7. Special Studies: 3–D Models Based On Intermediate Horizon 50 Series Model Strong, But Deteriorating. Forecast For The Reserve Model Is 10% And For Long Term Liquidity Model -1% (average 5 time horizons).

<u>Short Term Outlook Remains Cautious Since Market Overvalued On Several Measures. Longer Outlook (i.e. moving to Pres. Elect.) Continues To Be Slightly Bullish</u>.

Economic Outlook Is Uncertain And Is Confusing Market Outlook

The market has moved into a trading range since there is considerable uncertainty regarding the outlook for the economy. Symbolic letters are used to explain how the recovery might progress. "V" is for a rapid recovery with GNP growing 8-10% – 1st year after recession. "U" is used to suggest a slow recovery of 1-2% over the first year. "W" indicates that the economy will slip back into recession after a short recovery before a lasting recovery starts. "L" is used to indicate either a very long recession, or, still worse, a depression. The letters represent differing opinions over the nature of the recovery. The diversity of views is because the economy has changed making it hard to predict what will happen. The booming 1980s (stopped short of 8th birthday) was supported by huge societal borrowing (consumers; government - Fed, state, & local; & business) that is now creating a serious trouble in starting and keeping expansion going; and real estate speculation has weaken our major financial institutions' (s&ls, banks, & insur. firms) ability to lend, and low investment has seriously eroded our international competitiveness. The likelihood of the different recession scenarios based on what I read and discuss is "V" 10%, "U" 60%, "W" 30%, & "L" 10%. So much depends on how well the policy makers handle domestic and international matters. I recommend watching car sales (upturn), retail sales (downturn), real income (sliding), & money growth (weak) to evaluate how economy is doing.

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology July 22, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models A-E All Remain Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Trend Following F Model Strong, But Declining. It Often Recovers After Market Consolidates & Leads Market Higher (may not this time due to high P.E.).
2. Longer Term Liquidity Models Continued To Deteriorate Last Week. Daily Models Range From 42-81 (p. 7) & Weekly Models From 36-78 (p. 10). High Return Long Term Liquidity Model Falling (p.12).
3. Portfolio Strategies Recommend 100% Of Maximum Equity Exposure, But Could Start Disallocating If Models Continue To Deteriorate (pp. 9 & 11). Models Have Recommended Heavy Equity Exposure For 8 Months.
4. 50 Series Intermediate Horizon Models Have Peaked And Turned Down And Still Recommend A Heavy Exposure To Equities. Models Range From 74-93 (pp. 13 & 15-17).
5. Fed No Longer Easing Causing Reserve Models To Contract (pp. 10, 13, 14) - 3 Of 4 Are Now From 29-41.
6. a. Short Term Models: Causal And Distribution Models Have Gradually Improved Last 3.5 Weeks As Market Has Advanced. Slope Of Slower Direction Models Been Positive Last Few Weeks. Models Do Not Exhibit Strength That Normally Carries Market To New Highs.
   b. Divergence Models Have Become Quite Weak Similar To Level On 5/31 At Recent Market High (pp. 13-b).
7. Special Studies: a. 3-D Moving Down From High Level (pp 1-6) and b. Fundamentals Alarming (pp. 7-12)

Short Term Outlook Increasingly Cautious Since Market Overvalued On Several Measures.
Longer Term Going Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainity.

Fundamental Weakening

The Cover of this week's Market Commentary report is particularly suggestive of the near turn overvalued nature of the stock market. The S&P 500 Dividend Yield is down to 3.16% this week, and moving towards the dangerous 3 percent level! All that it would take for the dividend to fall to 3 percent or less is for the S&P 500 to increase to 390 (i.e. where it was on June 3rd), or for dividends to be further cut. We believe that one or both of these events is likely to occur over the next few weeks. Over the last 41 years the dividend yield has fallen below 3 percent on five occassions, and in all cases the market sold-off sharply shortly thereafter. We are suspect regarding the health of the market for several reasons. While there are numerous signs that the recession may have bottomed, there are many reasons to question the strength of the recovery. Lay-offs are still occurring in high technology firms like IBM; state and local governments found their budgets deeply in the red beginning in July and many are cutting back on their employment and expenditures; the consumer is heavily in debt having increased debt from 70 percent of income in 1980 to 90 percent in 1991 and needs to paydown debt rather than to increase it; Federal debt continues to grow as the borrowing hang-over grows worse; real estate values are still declining in many parts of the country. All in all we believe the economy, and in turn the stock market, is very vulnerable due to the 1980 philosophy of live and pay later, rather than shaping up and becoming more competitive.

stop

This week we present 6 charts on pages 7-12 that further examine the fundamental strength of the market underpinnings, and we find then all wanting.

What has cheered the market on to new heights is that the stock market often increasing 50 to 80 percent over the year are two following a recession. That would have carried the S&P 500 from close to 300 last October to 450+ over the next 1.5 years (say through the next Presidential Election). What

As the market has rallied over the past 6 months (6 most powerful months for the stock market over the 4 year Pres. Elect.), and with substantial gains in many portfolios, it is prudent to protect that value if the market is becoming overvalued. As discussed in 1. above, all five of the Valuation Models suggest that the market has become overvalued and is vulnerable. In addition, we are repeating 4 charts presented periodically that further explore the question of Value. The first chart (p. 7) suggests that the current P.E. is justified by a 3 percent CPI, while most of the forecasts we have reviewed suggest CPI to be from 4.5-5 percent in the 2nd half of 91 and on into 1992. We believe as others do that as the economy improves, there will be increased wage and price pressures. The next two charts (pp. 8&9) show that conditions have changed to "4" and "4" (P.E. in upper 4% of its range while the dividend is in the lower 4% of its range covering the past 17 years) as the market has advanced with the S&P 500 P.E. ratio up to 18.56 and the dividend down to 3.13 percent. Finally, it can be observed that most of the market advance since late 88 is due to a P.E. expansion of 50% - 12-18.

Time Forecasts

The market forecasts for different time horizons (4, 8, 13, 26, & 39 horizons) from the 3 Dimensional Analysis were unchanged this week. The average forecast for the Reserve Model is 10% (an average of the 5 time horizons), while the forecast for the Long Term Liquidity Model is -1%. In contrast, a few months ago the forecast of these models was for annual gains of 25-35 percent.

Divergence Model Warning

Explanation: One of our interesting and more complex models is based on Divergence between the short term causal models and price change (pp. S10&12). Positive Divergence occurs when the market is decreasing while the short term causal models are improving. Divergence numbers are considered "good" from 70-90 and "strong" from 90-100. When Divergence is from 70-100, the market is likely oversold and will soon rebound. Conversely, Negative Divergence occurs when the market is increasing while the short term causal models are decreasing. Divergence numbers are considered poor from 10-30 and bad from 0-10.

Extreme Level: While the short term causal models (pp. S10&12) have improved over the past two weeks, they remain relatively weak. In contrast, the S&P 500 has increased by approximately 5 percent increase over the past two weeks. This development has led to the Divergence Model plunging to the low level of 1 on a 100 point scale. Several major market corrections have been associated with such low readings and they include Oct. 1987, Oct. 1989, Jan. 1990, and July 1990. The five Valuation Models (pp. 1-5) all suggest that the market is overvalued and provide an independent confirmation that the stock market is very pricey.

Model Extensions: We believe the Divergence Model has considerable potential in your investment strategies for short term timing purposes, and we have prepared 3 extensions of the model for your consideration (see Cover and pp. S13 a-c). The 1st special chart extends the Divergence data back another year so we can see what happened during the 2nd half of 89 and the 1st half of 90 (p. S13a). Very negative Divergence was recorded before the Aug. and Sep. 89 corrections and the Jan. 90 correction - mkt. had become overvalued and vulnerable and sharply corrected as expected. Divergence is smoothed in the 2nd special chart to help identify the major patterns (p. S13b). As can be observed, when Divergence is high the market very often advances and when it is low the market frequently declines. The Divergence and Causal Models are combined in the 3rd special chart. It is often particularly bullish when both the Divergence and Causal Models are strong.

Fundamental Value?

As the market has rallied over the past 6 months (6 most powerful months for the stock market over the 4 year Pres. Elect.), and with substantial gains in many portfolios, it is prudent to protect that value if the market is becoming overvalued. As discussed in 1. above, all five of the Valuation Models suggest that the market has become overvalued and is vulnerable. In addition, we are repeating 4 charts presented periodically that further explore the question of Value. The first chart (p. 7) suggests that the current P.E. is justified by a 3 percent CPI, while most of the forecasts we have reviewed suggest CPI to be from 4.5-5 percent in the 2nd half of 91 and on into 1992. We believe as others do that as the economy improves, there will be increased wage and price pressures. The next two charts (pp. 8&9) show that conditions have changed to "4" and "4" (P.E. in upper 4% of its range while the dividend is in the lower 4% of its range covering the past 17 years) as the market has advanced with the S&P 500 P.E. ratio up to 18.56 and the dividend down to 3.13 percent. Finally, it can be observed that most of the market advance since late 88 is due to a P.E. expansion of 50% - 12-18.

Time Forecasts

Last week we explained the power of the new 3-dimensional analysis that uses both the level and the change of the 50 Series Reserve and Long Term Liquidity Models to forecast the stock market for 4, 8, 13, 26, & 39 week horizons. The charts and forecasts are presented on the next 6 pages (pp 1-6), and they remain unchanged for the prior week. The forecasted returns are down sharply from a few months ago and average 10% for the Reserve Model and 4.5% for the Long Term 50 Series Models. These models do not consider value.

MARKET COMMENTARY, **Stock Market Project, School of Management, Georgia Institute of Technology July 29, 1991 by Professor Fred Allvine**

Model Results

1. Valuation Models A-E <u>1 Neutral & 4 Negative</u> (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Trend Following F Model <u>Strong</u>, But Declining.
2. Longer Term Liquidity Models Tended To Stabilize This Week. Daily Models Range From 40-80 (p. 7) & Weekly Models From 38-78 (p. 10). High Return Long Term Liquidity Model Also Stabilizing (p.12).
3. Portfolio Strategies Recommend 100% Of Maximum Equity Exposure, But Could Start Disallocating If Models Continue To Deteriorate (pp. 9 & 11). Models Have Recommended Heavy Equity Exposure For 8 Months.
4. 50 Series Intermediate Horizon Models Have Peaked And Turned Down But Still Recommend A Heavy Exposure To Equities. Models Range From 74-92 (pp. 13 & 15-17). (They are parameterized around 50.)
5. Fed No Longer Easing Causing Reserve Models To Contract (pp. 10, 13, 14) - 3 Of 4 Are Now From 26-41.
6. Short Term Models A Mixed Picture: Direction (slower changing technical) And Causal Slightly Positive. However, Fast Trend Following Distribution Model Has Turned Down (p. S11&12). *Models Do Not Exhibit Strength Normally Needed To Carry Market Much Higher*. Short Term Models Close To A Stand-off. Divergence Models Present A Somewhat Stronger Picture For Short Term Market Movement (pp. 13a-c).
7. Special Studies: a. 3-D Moving Down From High Level (pp. 1-6) and b. *Fundamentals Alarming* (pp. 7-10)

<u>Short Term Outlook Increasingly Cautious Since Market Overvalued On Several Measures. Longer Term Going Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainty.</u>

New Causal Model

<u>Background</u>: For several months, we have been exploring the possibility of going beyond the monetary variables (i.e. interest rates, reserves, and money supply) that comprise the core of our short (few weeks to few months), intermediate (1-2 years), and long (3-4) time horizon <u>causal</u> models. We have long sought variables that would help to explain what causes: 1. the Fed Reserve to change its behavior or 2. that directly influences key financial variables (i.e. interest rates). For several months we have included 2 Raw Material Indexes (A & B) covering separate variables in the weekly report (pp. S7&8) or that are faxed daily. From studying the charts showing the different Raw Material Indexes it was clear that they often had a strong influence on short and longer term change of stock prices (influences that did not always show up in other causal variables).

<u>Characteristics</u>: This week we introduce a new model called Causal Model - R.M. (raw material) "A" which is presented on the next page (*1). From now on Causal Model - R.M. "A" will be one of our regular models presented in the weekly package (or faxed daily). As can be observed from the chart on the next page (*1), there were five reasonably well timed stock buy decisions from 1980 to the present. While there is no certainty that this model will perform as good in the future as in the past, we believe that it has a good chance of doing so since it measures one set of raw material prices that enter into the production process. No model is perfect and that is why we use sets of models in forecasting the stock market. On the negative side, we would have preferred that this model not have given a 2nd Buy S&P signal late in 1980 since the stock prices declined sharply over the next 1.5 years (it would have been ideal to have stayed out of stocks from late 1980 until the 2nd half of 1982). In addition, we would have preferred had the 4th buy signal occurred at the beginning rather than late in 1988. On the positive side, we liked the way the R.M. "A" model performed recommending being out of stocks before the July 90 high, and then recommending the purchase of stocks in Nov. 91 - close to the market low. Over the 11.5 year period presented, R.M. "A" model is estimated to have generated an annual excess return approaching 500 basis points after transaction costs (next week we will present the returns yearly and overall).

<u>Comparisons To Another Model</u>: One of our best models is the Daily Long Term Liquidity Model that has generated an excess return of close to 550 bases points above the S&P 500 over the past 20 years. The new Causal Model - R.M. "A" is co-plotted with the Daily Long Term Liquidity Model from 1980 on (p *2). Given that the new model is constructed from a set of raw material prices, one should expect that it would often lead the Daily Long Term Liquidity Model. In fact, the co-plot of the two models reveals that the new Causal R.M. "A" model often leads the Daily Long Term Liquidity Model (see on chart the no. of times the notation of "Leads" appears). We like the leading characteristic of R. M. "A" since it will warn us to be prepared to a change in the high performance Long Term Daily Liquidity Model. We have noted for several weeks in notes on the Index of Raw Material "A" (p. S7) that it has been much stronger than the liquidity models and has been providing support for the stock market. As can be observed from the chart, the R.M. "A" Model is presently near 70 while the Long Term Daily Liq. Model has fallen to near 40. (We are obtaining data on other raw material indexes and hope to design other Raw Material Models.)

Time Forecasts

The market forecasts for different time horizons (4, 8, 13, 26, & 39 horizons) from the 3 Dimensional Analysis is 13 % for the Reserve Model and -1% for the Long Term Liquidity Model. However, values weaker than when advance started.

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MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology August 5, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models (no change) A-E 1 Neutral & 4 Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Trend Following F Model Strong.
2. Longer Term Liquidity Models Have Stabilized The Past 2 Weeks And Provide Support For The Stock Market. Daily Models Range From 44-80 (p. 7) & Weekly Models From 35-79 (p. 10). Models In Neutral Position.
3. Portfolio Strategies Recommend 100% Of Maximum Equity Exposure, But Could Start Disallocating If Models Were To Further Deteriorate (pp. 9 & 11). Models Have Recommended Heavy Equity Holdings For 8 Months.
4. 50 Series Intermediate Horizon Models Have Peaked And Turned Down, But Still Recommend A Large Exposure To Equities. Models Range From 71-91 (pp. 13 & 15-17). (They are parameterized around 50.)
5. Reserve Models Have Contracted From Earlier Levels (pp. 10, 13, 14) - 3 Of 4 Are Now From 26-41.
6. Short Term Models Present A Mixed Picture: Direction (i.e. slower changing technical) And Causal Slowly Advancing. However, Faster Distribution Model Is Weak Around 50 (p. S11&12) And Does Not Support A Strong Market Advance. Much This Week Depends On How Well The Record Treasury Bond Auction Goes.
7. Divergence Models Good Performance Since April (during trend less market) And Is Now Strong (pp.13a-c).
8. Special Studies: a. 3-D Analysis Of 50 Series Models - Weakening (pp. 1-6), b. Fundamentals Factors - Alarming (pp. 7-8), and c. New Causal Factor "A" Model - Reasonably Good (pp 9-10)

Short Term Outlook Remains Cautious Since Market Overvalued On Several Measures. Longer Term Moving Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainty.

Dividend Yield / T-Bill Yield Indicator

The Indicator: In recent months, some bullish analysts have tried to marshall whatever indicators they can find which suggest that the stock market is in the early stages of its advance. One of the relationships they present to support their position of the stock market going higher is the ratio calculated by dividing the Dividend Yield by the T-Bill Yield (abbreviated Div./T-Bill Ratio). (It is often expressed the other way around as T-Bill/Dividend Ratio which we believe is confusing.) A chart of the Dividend/T-Bill Ratio is shown on the next page *1. This relationship has done a good job of suggesting when to "buy" and "sell" the S&P 500 over last 24 years. Following the recommended signals, an investment manager could have exceeded the return of the "buy and hold" S&P strategy by several hundred points. The "buy" signal is given when the Ratio climbs to .6 (or higher), and as can be observed stock often increase when the Ratio is above .6. The stock market often advances when the Ratio is above .6 since the dividend yield (plus prospect of stocks appreciating) is attractive relative to what can be earned from T-Bills. When the ratio is below .5, the stock market is often overvalued.

Concern Over Indicator: We have several problems with the Dividend/T-Bill Ratio, and believe that it could be providing a false bullish signal. 1. Our preference is for Valuation Models that not only have won the past battles, but are also winning the current battles. The history of this indicator shows that it was almost flawless (i.e. gave buy and sell stock signals at the correct time) from 1969-1988. However, the T-Bill/Dividend Ratio gave an early sell signal late in 1988 and thus missed the rapid advance of the stock market during 1989. It did give a buy signal in Jan. 91; however, the indicator barely reached the buy level and has not been above .6 since the week of the signal. Additionally, the signal was not given at the market bottom in Oct. 90. 2. The Fed has been giving increasing emphasis to the T-Bill in its policy to control the economy. As discussed several; times before, the Soft Landing Policy implemented between Mar. 88 & Mar. 89 involved driving up short term rates over 300 basis points (purpose to slow the pace of the economy and to slow the growth of inflation). The high level of the T-Bill caused the Dividend/T-Bill Ratio to fall giving an early sell signal late in 1988. Conversely, we now believe the Fed, in an effort to "jump start" the crippled economy, has driven short term rates (Fed policy is directed primarily to short term rates) to unusually low levels relative to longer term rates. (The Fed can do this through its Open Market Activities and its huge holding of Treasury issues.) Since the T-Bill is lower than would otherwise be the case the Dividend/T-Bill Ratio is higher. However, the Dividend/T-Bill Ratio is presently only .57 and not above .6 the level at which the stock market has rapidly advanced in the past.

Caution Signals

The 3 factors, in order of importance, that can drive stock prices upward are: 1. falling inflation, 2. earnings growth, and 3. positive investors' psychology. The early stage of market advances is normally driven first by declining inflation and then by improving earnings. The last, and often speculative stage, of a market advance is due to overly optimistic investors' psychology - the current stage of the stock market. Stock prices may go higher over the next few months, but if they do the market will be pushed to an unrealistically high level from which a rapid downward adjustment could be expected. At the present, 4 of our 5 Valuation Models are negative and 1 is neutral (see above). There are other classic signals suggesting that the stock market has reached a "pricey" level and that Caution is appropriate for the short run if prices move substantially to new highs. The other indicators include the lofty P.E. and low dividend yield (upper 4.5 and lower 4.5 percentiles respectively over the past 17 years). In addition, if the S&P climbs to or above its recent high, the dividend yield is likely to fall below the dangerous level of 3 percent (as explained in the prior 2 reports). We would not be surprised to see the markets move to new highs i but believe this could cause sharp market correction.

Time Forecasts

The 3-D analysis of 50 Series Models (4, 8, 13, 26, & 39 horizons) is unchanged - Reserve Model is 13% and Long Term Liquidity Model -1%.

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology August 12, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models (no change) A-E 4 Negative & 1 Neutral (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Dividend/T-Bill Model Is Neutral. Trend Following Model Remains Strong, If It Deteriorates Trouble Could Be Brewing. (pages 1-7)
2. Longer Term Liquidity Models Have Stabilized Last 3 Weeks, And Have Turned Up Providing Support For Stock Market. Daily Models Range From 52-80 (p.8) & 4 Of 5 Weekly Models Range From 47-81 (p.12).
3. Portfolio Strategies Recommend 100% Of Maximum Equity Exposure, But Will Start Disallocating Next Week If Reserve Models (weakest) Deteriorate Further (pp. 11 & 13).
4. Two Of The Three 50 Series (parameterized around 50) Intermediate Horizon Models Have Peaked And Turned Down Sharply - But Are Still Above 50 Sell Level. Models Range From 66-91 (pp. 15 & 17-19).
5. Reserve Models Have Contracted From Earlier Levels (pp. 12, 15, 16). The 3 Long & Intermediate Horizon Weekly Reserve Models Range From 22-31. The 50 Series Reserve Model Has Fallen Steadily To 65.6.
6. Short Term Models Present A Mixed Picture: Direction (i.e. slower changing technical model) And Causal Slowly Advancing (pp. S9&10). However, Faster Distribution Model Is Weak Around 50 (pp. S11&12) And Does Not Support A Market Advance. Stock Market Depends On What Happens To Bond Market This Week.
7. Divergence Models Good Results Since March. Divergence Now Strong, But We Are Skeptical (pp.S13a-c).
8. New Models: a. 3-D Analysis Of 50 Series Models - Weakening (pp. 1-6), b. Dividend/T-bill Is Neutral (p. 7), and c. New Causal Factor "A" Model - Reasonably Good (p. 10) - Recommend You Review New Model.

Short Term Outlook Extremely Cautious Since Market Overvalued On Several Measures. Longer Term Moving Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainty.

BARRON'S Article Is Even More Bearish

Market Very "Pricey". An article in this week's BARRON'S entitled "Is History Bunk?" by Thomas J. Feeney made me feel by comparison as if I were almost bullish. Since April we have been advising Caution regarding the stock market since it has reached over-valued levels (see charts on pp. 1-6). Four of five of our Valuation Models are negative, and one is neutral; even the Dividend/T-Bill ratio (discussed last week - p. 6) is not strong (i.e above .6), but rather between .5 (sell level) and .6 (level entry signal given). Also over the last 4 months, we have explained that the S&P 500 P.E. Ratio has been in the upper 4-5 percent of its range while the dividend yield has been in the lower 4-5 percent of its range covering the 17.5 years since 1973. The only time these value measure were lower was prior to the Mega Stock Market Crash of 1987. Furthermore, we believe that the P.E. and Dividend ratios are likely to jump up a notch on the overvalued scale when the 2nd quarter earnings and dividends are tallied up and reported. A few weeks ago, we also showed that the S&P 500 dividend yield has only fallen below 3 percent five times since 1950, and that the market fell sharply over the next 1-2 years. It could fall below 3 percent if the S&P 500 makes a new high, or if the dividend level is sliced a little, and one or both events could occur.

Why Investors Too Bullish: In our opinion, what has mislead many investors is that the stock market did not get crunched in this recession like it had in the three prior recessions. During the earlier recessions (74-5, 80, & 81-2), the S&P 500 P.E. Ratio declined to nearly 7 versus the recent recession (90-91) where it fell towards 14. The reason the P.E. ratio did not contract as much this time was due to the Soft Landing Program of the Federal Reserve which sent short term rates soaring 330 basis points from 3/88 to 3/89 to slow the pace of the economy to hopefully avoid a recession. The program moderated the inflationary pressures (only climbed from 4.5% - 6.5%), and kept the stock market from being sent reeling and P.E.'s from contracting sharply. The Soft Landing was for a time a success, and it might have gone on longer (i.e avoiding the 90-91 recession) had Iraq not invaded Kuwait destroying consumer confidence (that was already somewhat frayed). Those expecting a 50-80 percent gain in the stock market following the 90-91 recession failed to take into account the high level of the P.E. maintained during the recession. As a result, the 30 percent increase in the S&P 500 from Oct. 90 - Mar. 91 carried the stock market from being somewhat undervalued to slightly overvalued.

Plus & Minus Factors Reviewed: There are definitely some plus factors in the economic environment (i.e. declining defense spending and moderating inflation) that could keep the economy healthy as explained on the cover of this week's report. The bulls could still have their day if consumer prices move down to 3 percent and stays there, and economy gradually improves. Unfortunately, there are also some negatives (i.e. low savings and investment and declining competitiveness) which tend to offset the positive development. The fact of the matter is that there are a great number of uncertainties that lie ahead that makes forecasting the future a hazardous undertaking. To a certain extent that is why the stock market has been treading water and moving in a trading range the past four months as it awaits economic news that will push the market either lower or higher. Unfortunately, given our research on the economy we tend to be biased more toward the negative outlook which is certainly the tone of the Barron's article. However, we are going to stay with the monetary and technical models (i.e. constructed from interest rates, reserves, and money plus the technical models that pick-up the major market trend) that have performed quite well over the past 20 years, and particularly since 1980. At the present time most of the weekly and daily long term models are neutral (around 50) and turning upward. If they reverse themselves, and start falling sharply, we will sound the alarm.

Highlight Of Bearish Article From Barron's

I have taken the liberty of extracting most of the key thoughts from the Barron's article since I believe it contains several good points that need to be considered regarding where the market is likely headed.

Throughout the 20th century, some statistical conclusions are clear.
- The DJIA has sold at an average of 14 times. . .
- . . . have yielded a divided of about 4.5%.
- . . . sold at a bit more than 1.5 times their book values.

DJIA Value Now: P.E Ratio 23, Dividend Yield 3.08%, and Price To Book 2.25. (from figures)

. . . one finds there were always persuasive voices raised to convince investors that "it's different this time" to justify what, in retrospect, was excessive bullishness. . . . the market conclusions ultimately were always the same. The ratios of market value always reverted to their means.

If we apply the 20th century's average price-to-earnings, price-to-dividend and price-to-book ratios to today's levels of earnings, dividends and book values, we find that each suggests a Dow Industrials level around 2000. Once again above 3000, the Dow is about 50% above this century's norm. While the markets have occasionally spiked up to levels even more overvalued for very brief periods of time, they have always fallen precipitously from such rarefied air. It is also instructive to note that the market's value ratios have, logically enough, spent as much time below their 20th century averages as above them.

Strategists who argue today for a heavily equity-oriented approach see the economy emerging from a mild recession this quarter or next and expect visible growth in the economy and corporate earnings for an extended stretch ahead. At least implicitly, they contend that these historically high value ratios are justifiable because we will enjoy considerable growth in coming years. Let's examine the growth argument.

The question is not whether we will grow, but rather how much we will grow and what price we will assign to that growth. At today's prices, we are evidencing a willingness to spend 50% more for a dollar of earnings, dividends and book value than we have, on average, throughout the nearly completed 20th century. This is a century that has witnessed the introduction and growth of automobile and airplane travel, instant audio and video mass communications, information processing by computer and the development of numerous life-sustaining medicines and procedures.

To justify today's historically overvalued levels, much less to make a case for higher stock prices, we need growth at an even faster rate in the future than we have had so far this century. Is it likely that an ever more mature society will grow faster than a younger society, one closer to emerging status?

Can we grow our way to a validation of today's value ratios? While the market is not at all-time levels of overvaluations on any of the three measures cited earlier, there are only three historical precedents in which the three reached their current levels of overvaluation simultaneously . . . the only three similar combinations of overvaluation in these measures preceded the sharp stock market plunges that began in 1929, 1937, and 1973. The mildest of those was the 45% decline in the Dow Jones Industrials through 1973 and 1974. We have never in this century grown out of such an overvaluated condition without a serious stock market setback.

Will it be "different this time"? An examination of today's economic environments lends little support to the argument. Washington, and most private economists, are forecasting a subpar recovery.

This projected recovery is to occur with consumers, corporations and a government saddled with the greatest absolute and relative debt in U.S. history. We have as a nation moved in the 1980s from being the world's greatest-ever creditor to our present status as the world's greatest-ever debtor. As a consequence, the government is unable to provide the kind and degree of stimulus normally available to help lift the economy from recession. And as a result of the rampant borrow-to-buy mentality of the 1980s, the consumer, whose wallet is most influential in transforming the economy from recession into expansion, is strapped. Having saved in recent years at the lowest rate in a half-century, the consumer has far less money available than in past recessions.

This scarcely looks like a financial structure set to spawn a period of sustained growth at a more robust than usual rate. Instead, it looks strikingly like what most economists are calling a setting for slower-than-normal economic growth.

Where's the case for value measures 50% above the historic norm? In fact, more professionals are finding it difficult to make the case even for trendline growth. The lesson of our entire investment history is that these value measures will revert to their means. Unless earnings, dividends and book values skyrocket (and they never have in this century when their ratios have been substantially overvalued), these value measures must remain at precarious heights for years to come. There is a huge price gap below this market just to reach historically normal levels. Upward price progress from here would come only from investors' willingness to endure even greater overvaluations. Realization of just normal value relationships looms as a market disaster.

All that said, these measures, especially book value, are notoriously poor short-term market forecasters.

That leads to the great temptation to try to squeeze a little more return from stocks in this cycle. Once again, history argues against giving in to that temptation. Although markets have gone higher temporarily after these measures have reached such overvalued levels, markets have always retreated to levels, even if some years later, at which the conservative investor could reinvest without having sacrificed return.

Realistically, the only rationales for staying heavily in equities at this level are that you will be able to time the ultimate top or that "it'll be different this time" and history won't apply.

The probabilities argue convincingly against both.

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Model Results

1. Valuation Models: Not Much Change From What Has Existed Last 4 Months As Market Has Moved In A Sideways Pattern. Borrowing But Quite Accurate. Valuation Models A-E = 4 Negative & 1 Neutral (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Dividend/T-Bill Model Is Neutral. Trend Following Technical Model Remains Strong - Supported By Rotation - And Suggest Market Not Experiency A Broad Based Advance.(pp.1-7)
2. Longer Term Liquidity Models Have Improved Last 4 Weeks & Is Reason S&P Has Been Testing Top Of Range. Daily Models Have Advanced & Are From 60-80 (p.8) & 4 Of 5 Weekly Models From 49-82 (p.12).
3. Portfolio Strategies Based On Daily Models Still Recommend 100% Of Maximum Equity Exposure. But Decline In Weekly Reserve Model To Below 30 Has Caused 20 Part Weekly Portfolio Strategy To Now Recommed 95% (instead of 100%) Of Allowed Commitment To Market - Others Still At 100%. (pp. 11 & 13)
4. Two Of The Three 50 Series (parameterized around 50) Intermediate Horizon Models Have Peaked And Turned Down Sharply - But Are Still Above 50 Sell Level. Models Range From 60-92 (pp. 15 & 17-19).
5. Reserve Models Are The Weakest And Continue To Contract (Fed may be more concerned now about inflation believing it has done enough to stimulate economy) - (pp. 12, 15, 16). The 3 Long & Intermediate Horizon Weekly Reserve Models Range From 20-30. The 50 Series Reserve Model Has Fallen Steadily To 59.5.
6. Short Term Models Still Present A Mixed Picture: Direction (i.e. slower changing technical model) Gradually Advancing And Causal Models Quite Strong (pp. S9&10). But, Faster Distribution Model Is Weak Around 50 (pp. S11&12) And Does Not Suggest A Strong Market Advance. Could Be Difficult Week For Stock Market.
7. Divergence Models Now A Strong 96, But We Are Skeptical (pp.S13a-c). Special Anaysis This Week.
8. New Models: a. 3-D Models Weakening (pp.1-6) & **Special Report On Fundametal Value** (pp.7-10).

Short Term Outlook Extremely Cautious Since Market Overvalued On Several Measures. Longer Term Moving Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainty.

BARRON'S Article Is Even More Bearish

Market Very "Pricey". An article in this week's BARRON'S entitled "Is History Bunk?" by Thomas J. Feeney made me feel by comparison as if I were almost bullish. Since April we have been advising Caution regarding the stock market since it has reached overvalued levels (see charts on pp. 1-6). Four of five of our Valuation Models are negative, and one is neutral; even the Dividend/T-Bill ratio (discussed last week - p. 6) is not strong (i.e above .6), but rather between .5 (sell level) and .6 (level entry signal given). Also over the last 4 months, we have explained that the S&P 500 P.E. Ratio has been in the upper 4-5 percent of its range while the dividend yield has been in the lower 4-5 percent of its range covering the 17.5 years since 1973. The only time these value measure were lower was prior to the Mega Stock Market Crash of 1987. Furthermore, we believe that the P.E. and Dividend ratios are likely to jump up a notch on the overvalued scale when the 2nd quarter earnings and dividends are tallied up and reported. A few weeks ago, we also showed that the S&P 500 dividend yield has only fallen below 3 percent five times since 1950, and that the market fell sharply over the next 1-2 years. It could fall below 3 percent if the S&P 500 makes a new high, or if the dividend level is sliced a little, and one or both events could occur.

Why Investors Too Bullish: In our opinion, what has mislead many investors is that the stock market did not get crunched in this recession like it had in the three prior recessions. During the earlier recessions (74-5, 80, & 81-2), the S&P 500 P.E. Ratio declined to nearly 7 versus the recent recession (90-91) where it fell towards 14. The reason the P.E. ratio did not contract as much this time was due to the Soft Landing Program of the Federal Reserve which sent short term rates soaring 330 basis points from 3/88 to 3/89 to slow the pace of the economy to hopefully avoid a recession. The program moderated the inflationary pressures (only climbed from 4.5% - 6.5%), and kept the stock market from being sent reeling and P.E.'s from contracting sharply. The Soft Landing was for a time a success, and it might have gone on longer (i.e avoiding the 90-91 recession) had Iraq not invaded Kuwait destroying consumer confidence (that was already somewhat frayed). Those expecting a 50-80 percent gain in the stock market following the 90-91 recession failed to take into account the high level of the P.E. maintained during the recession. As a result, the 30 percent increase in the S&P 500 from Oct. 90 - Mar. 91 carried the stock market from being somewhat undervalued to slightly overvalued.

Plus & Minus Factors Reviewed: There are definitely some plus factors in the economic environment (i.e. declining defense spending and moderating inflation) that could keep the economy healthy as explained on the cover of this week's report. The bulls could still have their day if consumer prices move down to 3 percent and stays there, and economy gradually improves. Unfortunately, there are also some negatives (i.e. low savings and investment and declining competitiveness) which tend to offset the positive development. The fact of the matter is that there are a great number of uncertainties that lie ahead that makes forecasting the future a hazardous undertaking. To a certain extent that is why the stock market has been treading water and moving in a trading range the past four months as it awaits economic news that will push the market either lower or higher. Unfortunately, given our research on the economy we tend to be biased more toward the negative outlook which is certainly the tone of the Barron's article. However, we are going to stay with the monetary and technical models (i.e. constructed from interest rates, reserves, and money plus the technical models that pick-up the major market trend) that have performed quite well over the past 20 years, and particularly since 1980. At the present time most of the weekly and daily long term models are neutral (around 50) and turning upward. If they reverse themselves, and start falling sharply, we will sound the alarm.

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology August 26, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Dividend/T-Bill Model Is Neutral. Trend Following Technical Model Remains Strong - Supported By Rotation (pp.1-7).
2. Longer Term Liquidity Models Have Improved Last 5 Weeks & Reason S&P Has Moved Beyond Top Of Range. Models Have Advanced & Daily Are From 64-82 (p.8) & 4 Of 5 Weekly Models From 55.84 (p.12).
3. Only One Of The Portfolio Strategies Based On The Daily & Weekly Models Recommend Less Than 100% Of Maximum Equity Exposure. Decline In Reserve Model To Below 30 Has Caused 20 Part Weekly Portfolio Strategy To Recommend 95% (instead of 100%) Of Commitment To Equities (pp. 11 & 13)
4. Two Of The Three 50 Series (parameterized around 50) Intermediate Horizon Models Have Peaked And Turned Down Sharply - But Are Still Above 50 Sell Level. Models Range From 55-92 (pp. 15 & 17-19).
5. Reserve Models Are The Weakest And Continue To Contract (Fed may be more concerned now about inflation believing it has done enough to stimulate economy) - (pp. 12, 15, 16). The 3 Long & Intermediate Horizon Weekly Reserve Models Range From 22-32. The 50 Series Reserve Model Has Fallen Steadily To 55.2:
6. Market Advance Strongly Supported By Bond Index And Important *Raw Material A & B Indexes* (pp. S6-9)
7. Short Term Trading Models Advanced Rapidly Last Week - Causal And Technical Still Strong. (pp. S9&12).
8. Divergence Models Has Contracted After Being At Its Strongest Level In Years On Monday & Tuesday.
9. New Models: a. 3-D Models Stabilizing (pp.1-6) & **Special Report On Fundamental Value** (pp.7-10).

Short Term Outlook Extremely Cautious Since Market Overvalued On Several Measures. Longer Term Moving Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainty.

Four Year Anniversary Of Market High

Four Year Pattern: Four years ago last week the S&P 500 and DJIA recorded its all-time high, and then slid 30 percent over the next 15 weeks as we experienced the Stock Market Crash of 87 (see chart on 4 year Pres. Elect. term). Are there any similarities between now and four years ago? The answer is unfortunately, Yes! On the more conservative side one would have to say that the stock market is overvalued and "pricey", and that the downside potential is much greater than that on the upside. The prudent money manager cannot ignore what is happening. While the market is probably not as precarious as it was four years ago; it is, nonetheless, very over extended and could experience a rapid decline. The primary factor that drove the market to an unrealistic level in 1987 was the "bigger foul" theory that the U.S. stock market was considerably undervalued on a Price Earnings basis (less than half) that of Japan. Hence, some were convinced and sold others sold on the idea that the stock market could still climb further from its already elevated P.E. ratio, the highest that had been recorded since the end of the 1920s. Then reality set in. With the economy expanding too rapidly (due to soaring reserves designed to bring down the value of the dollar) inflation pressures increased, interest rates jumped, and the market corrected at one of its most rapid paces in history.

Rationale For Price: Four years ago the stock market jumped to an unsustainable level on the tale that we were going to close the Price Earnings Ratio gap with the Japanese, while the current tale running the market up to a similarly high and precarious level is the euphoria over the denouncement of Communism in the Soviet Union. There is no doubt that this is an incredible development after almost 50 years of Communistic Rule. However, the reality is that the Soviet Union is extremely unstable at this time and is on the verge of Civil War (Republics have always been hard to co-ordinate). Should civil strife break out then all the uncertainties of what may eventually happen could create huge international tensions - a development with uncertainty that the stock market would not like and could result in optimism turning into pessimism and causing stock prices to quickly retreat. In addition, there are domestic problems that could sour our economic situation such as a major financial failure involving a major bank or insurance company (F.D.I.C. needs shoring-up) or a further Wall Street scandal (i.e. another Solomon Brothers.). Furthermore, the Federal Deficit is being revised upward to more than an additional billion dollars every day of the week. That is not a healthy development, but part of the continuing negative legacy of our over borrowed economy of the past decade.

Signs Of Overvaluation: The S&P 500 made a new high this week and is over extended and vulnerable in much the same way that it was four years ago (as well as the DJIA - see BARRON'S article on inflated DJIA - Aug. 19, 91). One of the factors that has driven the market to a very high level is Investors' Expectations that the stock market could climb 50-80 percent from the recession low (like occurred following the prior 2 energy related recessions). However, due to the quasi successful Soft Landing Program of the Federal Reserve, the P.E. ratio did not collapse as in the past and the potential for recovery is much more limited and has enlarge already been recovered (see chart p 7). With the rapid gain of the stock market this past week, the S&P 500 P.E. Ratio has climbed to 22.2 times earnings. The P.E. ratio has only been higher 3.5 percent of the time since 1950 (last 41.5 years) and this occurred 4 times. After reaching such an overvalued level the stock market contracted sharply in 3 of the 4 cases (see charts pp. 8-9). The S&P 500 dividend yield has fallen to 3.09 percent and is in the upper 4 percent of its range over the past 19.5 years and was only less prior the the 1987 Stock Market Crash (see chart p. 10).

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MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology September 3, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Dividend/T-Bill Model Is Neutral. Trend Following Technical Model Remains Strong - Supported By Rotation (pp.1-7).
2. Longer Term Liquidity Models Have Improved Last 6 Weeks & Reason S&P Has Moved Beyond Top Of Range. Models Have Advanced & Daily Are From 66-79 (p.8) & 4 Of 5 Weekly Models From 57-83 (p.12).
3. Only One Of The Portfolio Strategies Based On The Daily & Weekly Models Recommend Less Than 100% Of Maximum Equity Exposure. Decline In Reserve Model To Below 30 Has Caused 20 Part Weekly Portfolio Strategy To Recommend 95% (instead of 100%) Of Commitment To Equities (pp. 11 & 13)
4. Two Of The Three 50 Series (parameterized around 50) Intermediate Horizon Models Have Peaked And Turned Down Sharply - But Are Still Above 50 Sell Level. Models Range From 52-92 (pp. 15 & 17-19).
5. Reserve Models Are The Weakest (Fed may be more concerned now about inflation believing it has done enough to stimulate economy) - (pp. 12, 15, 16). The 3 Long & Intermediate Horizon Weekly Reserve Models Range From 25-33. The 50 Series Reserve Model Has Fallen Steadily To 51.8.
6. Market Advance Strongly Supported By Bond Index And Important *Raw Material A & B Indexes* (pp. S6-9). However, the *Bond Index may have peaked since both Raw Material Indexes have turned down*. Major Chg.
7. Short Term Trading Models (Causal & Technical) Remain Strong, But Could Be Turning Down. (pp. S9&12).
8. Divergence Models Has Contracted After Being At Its Strongest Level In Yrs. A Week Ago Monday & Tues.
9. New Models: a. 3-D Models Mixed (pp.1-6) & **Special Report On Fundamental Value** (pp.7-10).

Short Term Outlook Remains Extremely Cautious - S&P Overvalued On Several Measures. Longer Term Moving Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainty.

Market In Speculative Phase

What Drives A Bull Market? The S&P 500 made another new high this week and is over extended and vulnerable in much the same way that it was four years ago. The three conditions that often drive a bull market are 1. declining inflation, 2. improving earnings, and 3. buyer optimism (i.e. greed). The bull market that started in 1982 was first driven by falling inflation (dropped from double digit to one percent), next driven by improved earnings (late 87 to late 89), and finally is being driven by unwarranted buyer optimism. We have just about completed the conditions normally associated with a long Bull Market.

Justification For Current Market Level: At the present time we have one of the highest markets in recent and longer term history. While the market may go considerably higher and knock-out the prior records, the higher it climbs the further it can fall. We are now entering two of the worsts months of the year for the stock market - September and October. The only possible basis for the present high level of stock valuation is that we are heading into a new period of stable low inflationary growth. It could happen, but we remain skeptical. The excesses of the 1980s - when all segments of the economy (public, business, and government) borrowed for the purpose of current consumption - have to be paid for. Savings fell to the lowest level in 50 years, productivity has grown very slowly , and the new debt load is burdensome. If we saw a bright light on the horizon for the U.S. economy, then the present high level of market valuation might be justified. However, we foresee poor times ahead given the low savings and capital investment over the past decade (i.e. we lived beyond our means). The legacy of the 1980s is a "borrowed out" economy - that is one of the reasons for the sluggish nature of consumer demand which is responsible for two-thirds of our GNP.

Fundamental Value: We repeated again this week, as the market made still another high, four charts showing that the fundamentals are very weak. The first chart (p.7) shows that the P.E. Ratio did not contract during the 90-91 recession as it had during the prior three recessions. The reason for this was the quasi-success of the Soft Landing that kept inflation from rising sharply as it had during prior recessions. As a result, the the market can not climb the 50-80% experienced after the prior recessions. The second chart (p. 8) shows that the growth in the S&P since 1988 has been entirely due to the P.E. climbing from 12 to 20. The third chart (p. 9) is also presented on the Cover of this week's report and it shows that the P.E. ratio is now at the upper 3.3 percent of its range over the past 41.5 years. It has been higher four times, and in 3 of the 4 cases the market fell sharply after reaching such a high overvalued level. The fourth chart (p. 10) shows the S&P 500 dividend yield and it is in the upper 4 percent of its range over the past 19 years (since early 1972). The dividend yield has risen to the current level five times since 1950 and the stock market has fallen sharply a while thereafter.

Two Interesting New Models

1. We have extended the Raw Material "B" Index (now shown of a 100 pt. scale) back to the begin of 1983 (when reliable data began). Extensive comments are present on the chart (p. *1) that reveal it power. The Index is weakening and could be pulling market down.
2. This week we present a Bond Model that has performed well since 1977 (p. *2).

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology September 9, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Dividend/T-Bill Model Is Neutral. Two Trend Following Technical Model Remains Strong - Supported By Rotation (pp.1-8).
2. Longer Term Liquidity Models Have Improved Over The Last 7 Weeks & Have Supported The Gradual Climb Of The Stock Market To New Highs. Daily Models Are From 68-77 (p.10) & 4 Of 5 Weekly Models From 56-82 (p.12).
3. 4 Of The 5 Weekly Portfolio Strategies Now Recommend A Slight Reduction In Equity Holdings Due To The Low Level Of The Reserve Models Recommend Less Than 100% Of Maximum Equity Exposure. Portfolio Strategies Based On Daily Models Still Recommend 100% Of Max. Commitment To Equities (pp. 12 & 14)
4. Reserve Models Are The Weakest - (pp. 13, 15, 17). The 3 Long & Intermediate Horizon Weekly Reserve Models Range From 25-37. The 50 Series Reserve Model Has Fallen Steadily To 49.7.
5. *Raw Material A & B Indexes* are weak, and offsetting strength of Bond Index (pp. S6-9) .
6. Short Term Trading Models (Causal & Technical) Present A Mixed Picture(pp. S9&12).
7. Divergence Model Has Sharply Advanced & Is Above 90 & Could Support A Short Market Upturn (p. S 13a)
8. New Models: a. 3-D Models Mixed (pp.1-6).

Short Term Could Experience Market Advance. However, S&P Overvalued On Several Meas. Longer Term Moving Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainty.

Three New Models

Last week we briefly introduced 2 new models and this week a 3rd model which we believe represent important additions that are helpful in forecasting the financial markets. Two of these models (Raw Material B and Bond) involve new independent and dependent variables and the 3rd (Technical) complements an existing type of model.

Technical Model: This week we add a new technical model shown on p.8 (last section) which complements the existing technical model presented on p. 7. Like they say in the opera "It isn't over until the fat lady sings", and that is analogous to the technical models. Good technical models will aid in identifying when the stock market is rapidly advancing and market exposure should be increased. Conversely, a technical model should reliably indicate when the stock market advance is over and market exposure should be reduced. Many investors are skeptical of technical models (as I have been) since most are based on moving averages which tend to provide a whipsaw--get in a little late and out a little late. Our technical models are constructed in a different manner which gives us more confidence that they can be helpful in indicating when major advances of the market start and stop. Furthermore, the technical models supplement the other special models - those involving sentiment and valuation. These special models (technical, psychological, and valuation) provide an important backdrop to the fundamental causal models constructed from interest rates, money supply, reserves, and raw materials.

Description: The new technical model (p. 8) is constructed from different variables than used in the existing one (p.7). Thus, the technical models reinforced each other and the signals that they have provided since 1982 are very similar. The new technical model has provided 6 stock buy signals since 1982 and has recommended being in the stock market during all the major advances. It has also recommended being out of stocks during periods of rapid decline in 84, 87 and 90 and during 2 sideways markets in 85 and 89. At the present the new technical model remains positive after recommending buying stocks in mid January. The new model is constructed from a technical variable that does tend to lead the market up and then down and that is why this particular model has performed so well. No one can assure that the future will be like the past, and hopefully the two technical models will continue to provide valuable insight into the major direction of the market. While I believe the market is quite overvalued based on the valuation models and other measures of fundamental value, the two technical models remain fairly strong. The next few weeks and months should provide a real test of the technical models.

Raw Material "B" Index: As discussed for several months, we strongly believe that the two raw material indexes provide important insights into what drives Fed policy and moves the other causal variables including interest rates, reserves, and money supply. Good daily data used for this Index is only available since the beginning of 1983 when the Index starts (see chart on *1 - next page). While we tried to build a decision rule model from this variable, we were unsuccessful in doing so given its unique properties (sometimes it has a great effect on the market and at other times it does not). However, as can be observed when Index B moves rapidly upward as it did in 86 and early 87, in early and mid 90, and in late 90 and early 91 stocks market climbed.

Bond Model: We have long been interested in developing a bond model. The first permanent bond model (shown on p. *2) has performed well over the past 15 years (since 1977). The model has given six buy recommendations and while one contributed to a small loss the other five were well timed. We expect to introduce additional bond models in the near future.

MARKET COMMENTARY, Stock Market Project, School of Management,
Georgia Institute of Technology September 16, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models A-E Continue To Be All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Dividend/T-Bill Model Is Neutral (did move slightly above .6). 2 Trend Following Technical Models Are Strong, But Could Be Deceptive (pp.1-8).
2. Longer Term Liquidity Models Have Improved Over The Last 8 Weeks & Have Supported Gradual Mkt. Advance Until Slide Last Week. Daily Models Are Fairly Strong & Range From 70-79 (p.10) & 3 Of 5 Weekly Models From 70-83 With Other 2 Weekly Model Pulled Down By Reserves (now improving) - p.12.
3. 4 Of The 5 Weekly Portfolio Strategies Now Recommend A Slight Reduction In Equity Holdings Below 100% Due To The Low Level Of The Reserve Models. Portfolio Strategies Based On Daily Models Still Recommend 100% Of Maximum Commitment To Equities (pp. 12 & 14). Summary Fed Models Fairly Strong.
4. Reserve Models Are Weakest - (pp. 13, 15, 17). The 3 Intermediate Horizon Reserve Models Range From 44-48 And Are Slightly Improved. However, Longer Term Horizon Model Down To 25, But Should Improve.
5. *Raw Material A & B Indexes* Have Weakened, And Are To A Degree Offsetting Strong Bond Index (pp.S6-9).
6. Short Term Causal Trading Models Strong, While Technical Models Are Weak (pp. S9&12). Mixed Picture.
7. Divergence Models Have Sharply Advanced & Are 95+ & Could Support A Short Market Upturn (p. S 13,a,b)
8. New Models: a. 3-D Models Mixed - Long Term Horizon Model Improving With Reserve Declining (pp.1-6).

Short Term Outlook Remains Very Cautious Since Market Overvalued On Several Measures. However, Could Experience Short Term Market Bounce Due To Strong Divergence Models. Longer Term Moving Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainty.

Double Counting?

We believe that the investment community has been doing some double counting, and that is one of the reasons that the stock market has climbed to record highs over the last few months. As we have repeatedly discussed the P.E. Ratio and the Dividend Yield have moved to near record levels suggesting that the market has become considerably overvalued. We believe the reason for pricing the market so high is that the investment community liked the improving inflation outlook plus the prospect that the economy would turn around causing improved earnings. To a degree these two conditions are incompatible since falling inflation normally means a weak economy. Conversely, an improving economy normally results in gradually increasing inflation. Gradually increasing inflation means that demand is strong and permits firms to pass through cost increases in slightly higher prices. What apparently hurt the market last week seemed to be growing realization that the economy may be weaker than many had thought to be the case.

Our own longer term economic research suggests that the economy is much weaker than many seem to believe - suffering a hangover from the borrowing decade of the 1980s. When borrowing finally slows as it has, the economy no longer gets the short term benefit from more borrowing, but rather a concern on the part of consumers and other segments of the economy that it is a time to cut back on spending and to pay down some of the debt. This is great news to the bond market, but can be neutral to negative for the stock market.

In summary, we believe that Low Growth of National Income and High Debt Level creates a Precarious Condition for the Economy. It could well be that until we start to receive some positive evidence that the economy is actually turning around, the stock market could do some back treading since the outlook for earnings improvement is quite uncertain.

How Good Inflation Nos.?

Generally the opinion seemed to be that the inflation news regarding the PPI and CPI last week was fairly good. However, a closer examination on the numbers does raise a question regarding whether inflation has been licked. Excluding food and energy, the core PPI increased at a 4.9 percent annual rate over the past three months. Similarly, excluding food and energy, the core CPI increased at an annual 4.6 percent rate. Such number are not all that positive when one realizes that the overall level of the indexes has benefited from sharply decreasing energy costs in comparison to a year ago this time. As the beneficial time comparison slides by, it is likely that energy costs will gradually rise and contribute to some deterioration of the inflation picture. We are not suggesting that the inflation outlook is poor, but rather that it is not as good and beneficial to the stock and bond markets as may appear to be the case on the surface. Continuing inflation and "no or slow growth", commonly referred to as stagflation, is not what is needed to support higher stock prices.

Enhancing Very Profitable

It has been our fundamental belief that enhancing a portfolio can be very profitable by using our long, intermediate, and short term stock market models. This week's BARRONS (pp. 16 & 26) has an article which suggests that the experience of the past four years strongly supports the superior return from portfolio enhancing strategies.

Divergence Models Strong

The divergence models are almost as strong as four weeks ago when the stock market experienced a major advance after a pullback due to uncertain regarding Soviet Union. The problem then and now is that the market is high and overvalued.

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Model Results

1. Valuation Models Same Familiar Story Of Last Few Months: A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Dividend/T-Bill Model Is Neutral. 2 Trend Following Technical Models: 1st Strong & 2nd Positive But Weakening. (pp.1-8).
2. Longer Term Liquidity Models Have Improved Over The Last 9 Weeks & Have Supported The Gradual Climb Of The Stock Market To New Highs. Daily Models Are From 73-80 (p.10) & 3 Of 5 Weekly Models Strong From 72-82 (other 2 are 25 and 57 - hurt from weak reserve models). (see p.12).
3. 4 Of The 5 Weekly Portfolio Strategies Now Recommend A Slight Reduction In Equity Holdings Due To The Low Level Of The Reserve Models Recommend Less Than 100% Of Maximum Equity Exposure. Portfolio Strategies Based On Daily Models Still Recommend 100% Of Max. Commitment To Equities (pp. 12 & 14)
4. Reserve Models Are The Weakest - (pp. 13, 15, 17). The 2 Intermediate Horizon And 50 Series Model Are From 46-48 & Shows Signs Of Gradual Improvement. Longer Term Weekly Reserve Model Has Fallen 25.1.
5. Bond Index Quite Strong (p. 3), Raw Material "A" Strong But Sliding (p.4), & Raw Material "B" Has Weakened (p.5). Overall Seem To Create A Fairly Good Background For Stock Market. (also pp. S6-9).
6. Short Term Trading Models: Causal Models Remain Very Strong. While Technical Could Bottom & Turn Up.
7. Divergence Models Remain Very Strong From Mid 80s To 100+. Further Suggest Possibility Of Short Term Market Advance That Could Carry Market To Top Or Above Trading Range (pp. S13,a,b)
8. New Bond Model - Positive, But Weakening (p. 6). More Bond Models Next Week.

Short Term Could Experience Market Advance Since Causal Models Remain Quite Strong. However, S&P Overvalued On Several Measures. Market Could Be Volatile If It Advances. Longer Term Moving Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainty.

DISCOUNT RATE CUT

A week ago, the Federal Reserve lowered the Discount Rate at which it makes loans to member banks (see chart on cover of report). The discount rate is the lowest it has been for almost 20 years, and there are suggestions that the Fed may be prepared for another cut. If the rate is reduced to 4.5 percent, it will be the lowest it has been since the mid 1960s (over 25 years). Clearly, we are witnessing a potentially significant development for the stock and bond markets.

The reason the Fed continues to push rates down is that the economy is very weak, and suffering from the *borrowing hangover* of the 1980s. So far lower rates have not had the traditional stimulative impact on the economy and that is why there could be yet another cut in the discount rate. The longer the economy is in a slumber, the worse the nonperforming assets become on the books of our major financial institutions (banks, s&ls, and insurance companies). It is very important (perhaps an imperative) that the economy turns around and starts to advance, and until this happens rates are likely to be headed down.

The fundamental problem is that governments (Federal, State, and Local) have overspent their budgets and are cutting back being unable to borrow more. As a result, the public sector is a drag on the economy. Consumers are borrowed out much like the Federal government since consumers have increased borrowing from 70 to 90 percent of their income from 1980 to 1990. As a result, the all-important consumer sector of the economy, accounting for almost two thirds of our GNP, is not increasing its expenditures. The consequence of the weak public and consumer sectors is that the economy is subdued and seems unresponsive to the normal stimulative medicine of the Federal Reserve (the actor of last resort in this burned out economy).

The cover chart shows the very beneficial impact that the eight major cuts in the Discount Rate has had on the stock market since 1964. It is one of the strongest statistical relationships that exits. However, subsequent cuts at times seem to be less significant as in 1976 when the market did not advance with the last cut in the rate. Overall, the rate reduction has to be viewed positively for the stock market. However, the question remains whether the economy is fundamentally different now and whether it will benefit the stock market. A serious question involves the issue of fundamental value since the market rapidly advanced from the 4th qtr. 90 - 1st qtr. 91. As a result the P.E. ratio is very high while the dividend yield is very low (at the upper of lower 4-5 percentile of its range over the past 18 years).

Divergence Model

The Divergence Model was very strong as reported 1week ago, and the market slowly struggled ahead. Again this week, the D. Models are very strong (one model over 100), and continues to suggest that the market could advance and possibly make a new high. The problem remains that of Valuation.

Three Indexes

This week we have prepared two new Indexes and one was presented last week (pp. 4-5). The Bond Index and the Raw Material "A" Index are quite strong (bond somewhat stronger than R.M. "A") and support a stock market advance. The R.M. "B" Index (introduced last wk.) is mid range, and we believe could stablize & may not hurt.

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology September 30, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models Same Story Of Last Few Months: A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Dividend/T-Bill Model Is Neutral. 2 Trend Following Technical Models: 1st Strong & 2nd Positive, But Weak. (pp.1-8).
2. Longer Term Liquidity Models Have Improved Over Last 11 Weeks & Were Responsible For The Gradual Climb Of S&P 500 To A New High. Daily Models Now From 78-87 (p.10) & 4 Of 5 Weekly Models Fairly Strong Ranging From 64-88. Reserve Is Other Weekly Model And Is Slightly Improved At 27. (see p.12).
3. Because Of Week Reserve Model, 4 Of The 5 Weekly Portfolio Strategies Recommend A Slight Reduction To 80-90 Percent Of Maximum Level Of Equity Holdings. Portfolio Strategies Based On Daily Models Still Recommend 100% Of Maximum Commitment To Equities (pp. 12 & 14).
4. Reserve Models Are The Weakest - (pp. 13, 15, 17). The 2 Intermediate Horizon & 50 Series Models Range From 37-58, And Are Gradually Improving. Longer Term Weekly Reserve Model Up Slightly To 27.4.
5. Bond Index Quite Strong (p. 7), Raw Material "A" Positive (p.8), While Raw Material "B" Has Declined (p.9). Background Fairly Good Background For Stock Market. (Also see pp. S6-9.) However, Seasonality Poor.
6. Short Term Trading Models: Causal Models Remain Very Strong. While Technical Are Neutral To Weak.
7. Divergence Models Remain Very Strong Ranging From Mid 80s To Almost 100. Any Further Dip In The Market Could Create A Good Short Term Buying Opportunity (pp. S13,a,b).
8. New Multi-Factor Bond Model: Buy Signal Given In Oct. Still In Effect (p. 11-14). New Bond Model Was 2.5 This Week & Fairly Strong With New Buy Signals Given At 4, And Sell Signals Given At -4. Other Bond Model (shown in relation to Dow Jones Bond Index) Is Also Positive And Slightly Above 50 On A 100 Scale.

Short Term Could Experience Market Advance Since Causal Models Remain Quite Strong. However, S&P Overvalued On Several Measures. Market Could Be Volatile If It Advances. Longer Term Moving Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainty.

DISCOUNT RATE CUT

A week ago, the Federal Reserve lowered the Discount Rate at which it makes loans to member banks (see chart on cover of report). The discount rate is the lowest it has been for almost 20 years, and there are suggestions that the Fed may be prepared for another cut. If the rate is reduced to 4.5 percent, it will be the lowest it has been since the mid 1960s (over 25 years). Clearly, we are witnessing a potentially significant development for the stock and bond markets.

The reason the Fed continues to push rates down is that the economy is very weak, and suffering from the *borrowing hangover* of the 1980s. So far lower rates have not had the traditional stimulative impact on the economy and that is why there could be yet another cut in the discount rate. The longer the economy is in a slumber, the worse the nonperforming assets become on the books of our major financial institutions (banks, s&ls, and insurance companies). It is very important (perhaps an imperative) that the economy turns around and starts to advance, and until this happens rates are likely to be headed down. The fundamental problem is that governments (Federal, State, and Local) have overspent their budgets and are cutting back being unable to borrow more. As a result, the public sector is a drag on the economy. Consumers are borrowed out much like the Federal government since consumers have increased borrowing from 70 to 90 percent of their income from 1980 to 1990. As a result, the all-important consumer sector of the economy, accounting for almost two thirds of our GNP, is not increasing its expenditures. The consequence of the weak public and consumer sectors is that the economy is subdued and seems unresponsive to the normal stimulative medicine of the Federal Reserve (the actor of last resort in this burned out economy).

The cover chart shows the very beneficial impact that the eight major cuts in the Discount Rate has had on the stock market since 1964. It is one of the strongest statistical relationships that exits. However, subsequent cuts at times seem to be less significant as in 1976 when the market did not advance with the last cut in the rate. Overall, the rate reduction has to be viewed positively for the stock market. However, the question remains whether the economy is fundamentally different now and whether it will benefit the stock market. A serious question involves the issue of fundamental value since the market rapidly advanced from the 4th qtr. 90 - 1st qtr. 91. As a result the P.E. ratio is very high while the dividend yield is very low (at the upper of lower 4-5 percentile of its range over the past 18 years).

Divergence Model

The Divergence Model was very strong as reported 1week ago, and the market slowly struggled ahead. Again this week, the D. Models are very strong (one model over 100), and continues to suggest that the market could advance and possibly make a new high. The problem remains that of Valuation.

Three Indexes

This week we have prepared two new Indexes and one was presented last week (pp. 4-5). The Bond Index and the Raw Material "A"

Index are quite strong (bond somewhat stronger than R.M. "A") and support a stock market advance. The R.M. "B" Index (introduced last wk.) is mid range, and we believe could stablize & may not hurt.

#40

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology October 7, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models Same Story Of Last Few Months: A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Dividend/T-Bill Model Is Neutral. 2 Trend Following Technical Models: 1st Strong & 2nd Positive, But Weak. (pp.1-8).
2. Longer Term Liquidity Models Have Improved Over Last 11 Weeks & Were Responsible For The Gradual Climb Of S&P 500 To A New High. Daily Models Now From 78-87 (p.10) & 4 Of 5 Weekly Models Fairly Strong Ranging From 64-88. Reserve Is Other Weekly Model And Is Slightly Improved At 27. (see p.12).
3. Because Of Week Reserve Model, 4 Of The 5 Weekly Portfolio Strategies Recommend A Slight Reduction To 80-90 Percent Of Maximum Level Of Equity Holdings. Portfolio Strategies Based On Daily Models Still Recommend 100% Of Maximum Commitment To Equities (pp. 12 & 14).
4. Reserve Models Are The Weakest - (pp. 13, 15, 17). The 2 Intermediate Horizon & 50 Series Models Range From 37-58, And Are Gradually Improving. Longer Term Weekly Reserve Model Up Slightly To 27.4.
5. Bond Index Quite Strong (p. 7), Raw Material "A" Positive (p.8), While Raw Material "B" Has Declined (p.9). Background Fairly Good Background For Stock Market. (Also see pp. S6-9.) However, Seasonality Poor.
6. Short Term Trading Models: Causal Models Remain Very Strong. While Technical Are Neutral To Weak.
7. Divergence Models Remain Very Strong Ranging From Mid 80s To Almost 100. Any Further Dip In The Market Could Create A Good Short Term Buying Opportunity (pp. S13,a,b).
8. New Multi-Factor Bond Model: Buy Signal Given In Oct. Still In Effect (p. 11-14). New Bond Model Was 2.5 This Week & Fairly Strong With New Buy Signals Given At 4, And Sell Signals Given At -4. Other Bond Model (shown in relation to Dow Jones Bond Index) Is Also Positive And Slightly Above 50 On A 100 Scale.

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MARKET COMMENTARY, Stock Market Project, School of Management,
Georgia Institute of Technology October 14, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models *No Change* From Last Few Months: A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Dividend/T-Bill Model Is Neutral. 2 Trend Following Technical Models: 1st Fairly Strong And 2nd Positive (But Weak). (pp.1-8).
2. Longer Term Liquidity Models Have Improved Over Last 12 Weeks & Were Responsible For The Gradual Climb Of S&P 500 To A New High. Daily Models Now From 78-88 (p.10) & 4 Of 5 Weekly Models Fairly Strong Ranging From 65-88. Reserve Is Other Weekly Model And Is Slightly Improved At 30. (see p.12).
3. Because Of Week Reserve Model, 4 Of The 5 Weekly Portfolio Strategies Recommend A Slight Reduction To 80-90 Percent Of Maximum Level Of Equity Holdings. Portfolio Strategies Based On Daily Models Still Recommend 100% Of Maximum Commitment To Equities (pp. 12 & 14).
4. Reserve Models Are Weak, But Improving - (pp. 13, 15, 17). 2 Intermediate Horizon & 50 Series Models Range From 47-62, & Are Gradually Improving. Longer Term Weekly Reserve Model Up Slightly To 30.
5. Bond Index Quite Strong (p. 7), Raw Material "A" Good (p.8), While Raw Material "B" Has Declined (p.9). *Background Fairly Good Background For Stock Market.* (Also see pp. S6-9.) However, Seasonality Poor.
6. Short Term Trading Models: Causal Models Sliding, But Still Strong. Technical Models Are Neutral To Weak.
7. Divergence Models Remain Strong Ranging From Mid 78 To 88. Any Further Dip In The Market Could Create A Good Short Term Buying Opportunity (pp. S13,a,b).
8. 3-Dimensional Analysis Of 50 Series Reserve & Bond Models Suggest Possibility Of Small Advance Over 5 Time Horizons.
9. New Multi-Factor Bond Model: Buy Signal Given In Oct. Still In Effect (p. 11-14). New Bond Model Was 3.3 This Week & Fairly Strong With New Buy Signals Given At 4, And Sell Signals Given At -4. Other Bond Model (shown in relation to Dow Jones Bond Index) Is Positive & Slightly Above 50 On A 100 Scale (p. 10).

Short Term Could Experience Market Advance Since Causal Models Remain Quite Strong. However, S&P Overvalued On Several Measures. Market Could Be Volatile If It Advances. Longer Term Moving Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainty.

Economic Outlook Weakening?

While the Bush Administration is trying to put a "happy face" on the economy, some business leaders are reporting that there is a growing possibility of the economy weakening during the fourth quarter of this year. In recent weeks, there have been signs that the economy may be slumping from its already lackluster pace. Furthermore, there is a growing belief that the unemployment numbers were understated last month, and that there might not have been any new jobs created. Making matters perhaps worse lay-offs seem to be continuing. We believe this recession is quite different from the other ones experienced since WW II. The heavy borrowing throughout the 1980s by consumers and the Federal government (and cut-backs at the state and local levels) have virtually tranquilized a large part of the economy. The business sector can not continue to improve without a pick-up in consumer and government spending. If the Administration perceives that the situation is serious, then a further cut in the Discount Rate and Fed Funds Rate is likely. Jump-starting the economy has so far been difficult, and this could continue to be the situation. If the economy remain very slow, we expect that it will be good for bonds but poor for earnings and the stock market.

Multi-Factor Bond Model

Two weeks ago we introduced the Multi-Factor Bond Model which has performed quite well in the past, and we believe it has good future potential. The bond model has 3 components: Value, Econ, and Fed. The Value component of the model measures the present bond price in relation to other interest rates and financial instruments. The Econ component is based on several variables which measure the performance of the economy. The Fed component is derived from actions of the Fed which have been correlated with bond prices. At the present, the Value and Econ Components are fairly strong, while the Fed element is neutral. The Macro Bond Model is equal to the sum of the three models and is 3.33 this week (pp. 10-11).

The performance of the Multi-Factor Bond model was improved when it was converted to an Index. The Macro Model was smoothed using a 5 week exponential moving average, and then ranked and indexed from 0-100 (as is done with all the stock models). The Multi-Factor Bond Index gave 10 well-timed buy signals from 1975 to the present. The Buy and Sell Bond Rules used with the Index is to purchase bonds when the index climbs to 80, and to sell bonds when it falls below 35.

Last week we co-plotted the Multi-Factor Bond Model (in its 2 forms) with the S&P 500. That analysis showed that the new Bond Model generally leads an upturn in the stock market. In addition, the Bond Model often remains strong over the early and middle stages of the stock market advance. Finally, the Bond Model frequently turns down before the stock market tops. The results suggest that an optimal asset allocation strategy could involve switching between stocks, bonds, & cash.

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology October 21, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models *No Significant Change* From Last Few Months: A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Dividend/T-Bill Model Is Neutral. 2 Trend Following Technical Models: 1st Fairly Strong & 2nd Positive But Weak. (pp.1-8).
2. Longer Term Liquidity Models Have Improved Over Last 13 Weeks & Were Responsible For The Gradual Climb Of The DJIA To A New High. Daily Models Now From 78-88 (p.10) & 4 Of 5 Weekly Models Fairly Strong Ranging From 67-89 (both sets unchanged). Wkly. Reserve Model Slightly Improved At 31(see p.12).
3. Due To Reserve Model, 4 Of The 5 Weekly Portfolio Strategies Recommend A Slight Reduction To 80-90 Percent Of Maximum Level Of Equity Holdings. Portfolio Strategies Based On Daily Models Still Recommend 100% Of Maximum Commitment To Equities (pp. 12 & 14).
4. Reserve Models Are Weak, But Improving - (pp. 13, 15, 17). 2 Intermediate Horizon & 50 Series Models Range From 44-63, & Are Gradually Improving. Longer Term Weekly Reserve Model Up Slightly To 32.
5. Bond Index Quite Strong (p.7), Raw Material "A" Good (p.8), While Raw Material "B" Has Declined (p.9). *New Combo Index* (aver. of Bond & R.M. A &B) Is Neutral (p.10) *Background Guarded*. Poor Seasonality.
6. Short Term Trading Models: Causal Models Good, But Deteriorating. Technical Models Positive.
7. Divergence Models Have Chgd. From Being Quite Strong For 2 Wks. To Now Being Negative (pp. S13,a,b).
8. 3-Dimensional Analysis Of 50 Series Reserve & Bond Models - One Positive And One Negative.
9. New Multi-Factor Bond Model: Another Buy Signal Last Wk. (3rd in series) Given In Oct. Still In Effect (p. 12-17). Other Bond Model (shown in relation to D.J. Bond Index) Is Positive And 45 On A 100 Scale (p. 11).

Short Term Market Becoming Overvalued With Divergence Model Down To A Negative 10. Also, S&P Overvalued On Several Measures. Market Could Be Volatile If Advances Further. Longer Term Moving Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainty.

Valuation- Market Risky

As the S&P moved to a new record high a few months ago, we presented a series of charts involving the P.E. and Dividend Yield showing that the market had become overvalued and vulnerable. Given the attention to the bond models, we did not present the P.E. and Dividend charts this week (but will next week if market pushes higher). However, the P.E. ratio is at the upper 4 percent of its range and the dividend yield at the low 4 percent of its range covering the past 18 years. Additionally, the S&P dividend yield has only fallen to 3 percent five times since 1950 and the market was down sharply 12 to 18 months later. The S&P 500 dividend yield is presently 3.11 percent and will fall to almost the 3 percent level if the S&P 500 climbs above 400. Given the serious problems undermining our economy we believe the market is becoming quite over-extended. Furthermore, we believe that evidence is mounting the the economy is beset by either stagnation or stagflation as will be discussed next week.

New Combo Index

For several months we have presented a bond model index and two raw material indexes which have a strong impact on stock prices (pp. S6-8). For the last few weeks we have lengthened the time period of these indexes so they start at the beginning of 1983 (date when data for one of the indexes first became available). This week we have developed a Combo Index (average of other three indexes) which combines some major forces we believe drive the stock market (p. 10). As can be observed, the change and level of the Combo Index is highly correlated with changes in S&P 500.

Multi-Factor Bond Model

The creation of bond models was one of our research objectives for this year. For a few months we have been presenting a signal factor bond model that has performed quite well (p. 11). Three weeks ago we introduced the Multi-Factor Bond Model which has a good historical performance record (pp. 12-17). The Multi-Factor Bond Model climbed to above 4 this week and gave another signal to buy bonds. The model is optimized over a 13 week horizon and is forecasting a possible gain of 4 percent excess return sometime over the next 13 weeks (p. 12). However, this represents the 3rd series of buy signals since the last sell signal. As can be observed, the earlier signals tend to be more reliable with the latter signals being reversed by a sell signal. The level of the M.F. Bond Model is strongly correlated with the change in the Ryan Excess return as shown on (p. 13 b). Stagnation will be good for Bonds, but not stagflation.

Divergence

Divergence Model continues to record a fairly good performance record in the sideways trading market since April (see p. S13). It is a sophisticated model that measures the relationship between price and short causal models. When it becomes very positive (causal strong and price weak), stocks are likely to advance. When opposite conditions exist, stock prices are expected to decline. Two weeks ago Divergence Model was extremely strong and one week ago strong. Then when S&P 500 pulled back to level of Russian Coup of 2 months ago stocks surged forward. Divergence Model now down to a low 10, and if stocks advance model will become more negative. Warrants close watching.

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology October 28, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models *No Significant Change* From Last Few Months: A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Dividend/T-Bill Model Is Slightly Positive. 2 Trend Following Technical Models: 1st Strong & 2nd Fair. (pp.1-8).
2. Longer Term Liquidity Models Deteriorated Last Wk. After Improving Prior 13 Weeks. Strength Responsible For Gradual Climb Of The DJIA To A New High. Daily Models Now From 74-83 (p.9) & 4 Of 5 Weekly Models Fairly Strong Ranging From 68-87. Wkly. Reserve Model Slightly Improved At 35 (see p.13).
3. Due To Reserve Model, 4 Of The 5 Weekly Portfolio Strategies Recommend A Slight Reduction To 80-90 Percent Of Maximum Level Of Equity Holdings. Portfolio Strategies Based On Daily Models Still Recommend 100% Of Maximum Commitment To Equities (pp. 12 & 14).
4. Reserve Models Are Improving - (pp. 13, 16, 17). 2 Intermediate Horizon & 50 Series Models Range From 62-67, & Are Considerably Improved. 50 Series Reserve Model Up Slightly To 45.
5. Bond Index (p.7) & Raw Material "A" (p.8) Are Gradually Declining, While Raw Material "B" Is Quite Weak (p.9). *New Combo Index* (aver. of Bond & R.M. A &B) Is Neutral (p.10). Poor Seasonality.
6. Short Term Trading Models: Causal Models Weak As Our Technical Models.
7. Divergence Models Were Negative Last Week And Market Corrected. Models Remain Weak (pp. S13,a,b).
8. 3-Dimensional Analysis Of 50 Series Reserve & Bond Models - One Positive And One Negative.
9. New Multi-Factor Bond Model: Recent Buy Signal (3rd in series) Earlier Buy Signal Still In Effect (p. 12-15). Other Bond Model (shown in relation to D.J. Bond Index) Has Fallen To 39 On A 100 Scale (p. 11).
10. New Multi-Factor Stock Model This Week. High Performance Model Gave Sell Signal 2 Wks Ago (p. 6).

Last Week Divergence Model A Negative 10 & Market Corrected. Divergence Remains Weak. S&P Still Overvalued On Several Measures. Market Could Be Volatile If Advances Further. Longer Term Moving Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainty.

Stock Still Highly Valued

We started the discussion last week by noting that the stock market had become quite overvalued again as the DJIA made a record and the S&P 500 climbed towards the top of its range. Two weeks ago, the S&P 500 was in the upper tail of its range (highest 4%) and the S&P dividend yield was in the lower tail of its range (lowest 4%) covering the past 18 years. Had the markets held at their extended levels, we would have presented the special set of valuation charts periodically shown. We believe that it is very important to consider Valuation as well as the primary daily and weekly Monetary/Liquidity Models (constructed from interest rates, reserves, and money suppy). The Fed sets the conditions for the market to move, and the stock market is likely to advance rapidly if the market is undervalued (conditions that existed in 4th qtr. 90). However, market participants often become overly enthusiastic and the market moves from an undervalued state to an overvalued state (as has been the condition for several months). To date we have separated the analysis of the strength of the Monetary Models from the Valuation Models. This week we introduce a new model that incorporates both Fed Conditions and Market Valuation.

Multi-Factor Stock Model

Four weeks ago we introduced a new Multi-Factor bond model that has performed extremely well since 1975, and this week we present its twin the new **Multi-Factor Stock Model.** The new stock model has two components (Value and Fed) that are combined to give the macro model value (which will be reported weekly). We urge you to study the history and performance of the new stock model (see p. 16). As with the new bond model, the more comprehensive stock model has an impressive track record with an excess return of close to 600 basis points from 1975 to the present. The new stock model gave its tenth sell signal 2 weeks ago when the DJIA made its new high and S&P 500 moved toward the top of its range. We believe that the new and more comprehensive stock model represents an important addition to the package since it incorporates both Liquidity Conditions and Market Valuation. Another attractive feature of this model is that the model values represent forecasts of expected change in the stock market anytime over the next 13 weeks. A buy signal is given when the model climbs to 7 and a sell signal is registered when the model falls below 7 (as it did 2 weeks ago). The expectation is thus that the S&P 500 could decline 7% sometime over the next 13 weeks. Conversely, the bond model is fairly strong at 4 which suggests that long terms bonds could increase 4% over 13 wks.

Divergence

Divergence Model measures the ranked relationship over 5000+ days between the 10 day change in the S&P 500 and a short term causal model. Negative Divergence occurs when as two weeks ago the S&P advanced and the causal model fell. As can be observed from the chart on p. S13, the Divergence Model has performed very well in the sideways market of the past 6 months. Presently, the Divergence model is weak at 37, but stronger than a week ago when it was a negative 10.

***MARKET COMMENTARY*, Stock Market Project, School of Management, Georgia Institute of Technology November 4, 1991 by Professor Fred Allvine**

Model Results

1. Valuation Models *Fundamentals Remain Basically Unchanged*: A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Dividend/T-Bill Model Is Slightly Positive (improving). 2 Trend Following Technical Models: 1st Strong & 2nd Fair. (pp.1-8).
2. Longer Term Liquidity Models Improved Last Week And Remain Fairly Strong. Strength Responsible For Gradual Climb Of The DJIA To A New High. Daily Models Now From 74-87 (p.9) & 4 Of 5 Weekly Models Fairly Strong Ranging From 74-89. Wkly. Reserve Model Slightly Improved At 38 (see p.13).
3. Due To Weak Reserve Model, 4 Of The 5 Weekly Portfolio Strategies Recommend A Slight Reduction To 80-90 Percent Of Maximum Level Of Equity Holdings. Portfolio Strategies Based On Daily Models Still Recommend 100% Of Maximum Commitment To Equities (pp. 12 & 14).
4. Reserve Models Continue To Improve. 2 Intermediate Horizon Models Are 65 & 72. 50 Series Model Is Up To 46 (pp. 13, 16, 17). There Is An Adequate Supply Of Credit For Banks To Lend If Applications Are Good.
5. Bond Index (p.7) & Raw Material "A" (p.8) Have Stabilized & Are Fairly Strong. Raw Material "B" Is Quite Weak And Could Pressure Stocks (p.9). *New Combo Inde*x (aver. of Bond & R.M. A &B) Is Neutral (p.10).
6. Short Term Trading Models: Causal Models Strengthening, And Technical Models Improving.
7. Divergence Models Are Gradually Improving Suggesting Market Could Work Higher (pp. S13,a,b).
8. 3-Dimensional Analysis Of 50 Series Reserve & Bond Models - One Positive And One Negative.
9. New Multi-Factor Bond Model: Recent Buy Signal (3rd in series). Earlier Buy Signal Still In Effect (p. 12-15). Other Bond Model (shown in relation to D.J. Bond Index) Continues To Recommend Buying Bonds (p. 11).
10. New Multi-Factor Stock Model. High Performance Model Gave Sell Signal 3 Wks Ago (p. 16).
11. **Special Report**: Stock Prices Push To Upper Limit On P.E. And Lower Limit On Dividends (pp 17-18)

Divergence Model And Short Term Causal Models Improving. Better Short Term Outlook. S&P Still Overvalued On Several Measures. Market Could Be Volatile If Advances Further. Longer Term Moving Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainty.

Stocks Pricey

This week the S&P 500 is in the upper 4% of its range and the S&P dividend yield in the lower 4% of its range (covering the past 18 years). It is also very pricey taking a longer term perspective. There have only been five times since 1950 that the S&P 500 dividend yield has been below its current level of 3.1%. As can be observed from the chart (see p. 17), such a low dividend yield has been followed in all cases by a declining stock market. Similarly, the S&P 500 ratio has climbed to 20.1 and there have only been four times that the stock market has been bid-up to such a high level. As can be observed from the chart (p.18), the stock market has corrected shortly after reaching such a high multiple. An important question is "whether or not conditions are different this time and warrant such a high P.E. and a low Dividend Yield. Interest rates have come down sharply and it is quite possible that the discount rate could be cut from 5% - 4.5% - to its lowest level since the 1960s and early 1970s. Lower rates have generally been good for the stock market since the 1970s, but there have been times in the past (30s, 50s, 60s) when lower rates have been poor for stocks.

Multi-Factor Stock Model

The new Multi-Factor Stock Model (twin on new bond model) was designed to combine both Fed Conditions (i.e. interest rates, reserves, & money) and Stock Market Valuation. If the stock market becomes "overvalued" (i.e. P.E. too high & Dividend Yield too low), then negative Valuation can offset positive Fed Conditions. This is what happened 3 weeks ago when the new multi-factor stock model gave its 10th sell recommendation since 1975 (p. 16). While Fed conditions remain fairly strong, the stock market has become quite overvalued. For the stock market to warrant the current level of Valuation, the economy and earnings will have to improve substantially over the next year. Unfortunately, given the borrowing excesses of the 1980s, the economy is likely to grow very slowly making it difficult for firms to increase prices and profits.

Long Term Liquidity Model Strong

This week we produced for the Cover of the Report the Long Term Weekly Liquidity Model from 1980 to the present. As can be observed, this model has provided 5 good buy decisions and 4 sell decisions. It is the best performing weekly model providing an excess return of close to 600 basis points (after charging 1% when buying and again when selling stocks). The model is presently at a reasonably strong 75, and does not suggest by itself that stocks should be in any real trouble. However, as discussed above the opposite conclusion is suggested when Valuation is considered. The strength of the Liquidity Models stands in stark contrast to the extreme weakness of the Valuation Models. It the economy grows at a 3+ percent annual rate over the next 12 months then the stock market is probably not seriously overvalued. In contrast, should growth be slower than 3 percent, and still worse the recession continue, then stock are way overvalued and the stock market is quite vulnerable.

MARKET COMMENTARY, **Stock Market Project, School of Management, Georgia Institute of Technology November 11, 1991 by Professor Fred Allvine**

Model Results

1. Valuation Models *Continue To Suggest That The Stock Market Is Overvalued*: A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Dividend/T-Bill Model Is Slightly Positive. 2 Trend Model: 1 Is Strong And Other Is Fair. (pp.1-8).
2. Longer Term Liquidity Models Improved Again Last Week And Remain Fairly Strong. Strength Responsible For Markets Making & Contemplating New Highs. Daily Models Now From 77-89 (p.9) & 4 Of 5 Weekly Models Are Also Strong And Range From 77-89. Wkly. Reserve Model Rapidly Improving At 46 (see p.13).
3. 4 Of The 5 Weekly Portfolio Strategies Recommend A Slight Reduction To 80-90 Percent Of Maximum Level Of Equity Holdings Due To Weak Reserve Model A Few Months Ago. Portfolio Strategies Based On Daily Models Still Recommend 100% Of Maximum Commitment To Equities (pp. 12 & 14).
4. Reserve Models Continue To Improve. Fed Is Providing Banks All The Liquidity Needed. Problem Is That Their Balance Sheets Are In Bad Shape & Potential Loans Are Not Very Attractive. 2 Intermediate Horizon Models Are Up To 77 & 72. 50 Series Model Has Advanced To 48 (pp. 13, 16, 17).
5. Bond Index (p.7) & Raw Material "A" (p.8) Are Quite Strong. However, Raw Material "B" Is Weak And Keeps Pressure On Stocks (p.9). *New Combo Index* (aver. of Bond & R.M. A &B) Is Turning Up (p.10).
6. Short Term Trading Models: Causal Models Reasonably Strong, While Technical Models Are Mixed.
7. Divergence Models From High 60s To Low 70s, And Are Supportive Of A Market Advance(pp. S13,a,b).
8. 3-Dimensional Analysis - 50 Series Reserve & Bond Models - Very Positive (range where mkt. often climbs).
9. New Multi-Factor Bond Model: Recent Buy Signal (4th in series). Earlier Buy Signal Still In Effect (p. 12-15). Other Bond Model (shown in relation to D.J. Bond Index) Strong & Recommends Holding Bonds (p. 11).
10. New Multi-Factor Stock Model. High Performance Stock Model Gave Sell Signal 4 Wks Ago (p. 16).
11. **Special Report**: Stock Prices Push To Upper Limit On P.E. And Lower Limit On Dividends (pp 17-18). However, Discount Rate Cut Is Positive (pp. 19-21). Market Normally Increases Following A D.R. Cut.

Divergence Model And Short Term Causal Models Improving. Better Short Term Outlook. S&P Still Overvalued On Several Measures. Market Could Be Volatile If Advances Further. Longer Term Moving Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainty.

Triple Factor Bullishness

(Taken from report of 12/21/90) ... The Fed has succeeded in slowing the economy and bringing inflation under control and continues the process of easing. The charts show what has happened when the Fed has reduced the Fed Funds and also cut the Discount Rate. Over the past 40 years this twin condition has been very bullish for the stock market. The third factor that is extremely bullish is the reduction in the reserve requirement. We have experience 3 factor the past four weeks that have been historically very bullish for the stock market.

The question now is "what is the significance of the 5th cut in the Disc. Rate since last December?" To provide some clues as to what might be expected, we reproduced and update the charts prepared last December showing the major reduction in the Disc. Rate in relation to the stock market. What the charts indicate is that additional cuts in the Disc. Rate are normally good for the stock market. Late in 1976 was the only time when the last cut in the D. R. was not followed by an increase in the stock market (p. 20). Should the economy remain sluggish, then we may yet have another D.R. cut. The problem is that the market is very pricey.

Tug-A-War: Liq. vs. Value

If one merely considers our liquidity models (constructed from interest rates, reserves, and money supply) the outlook for the stock market is strong with the 3 daily and 4 weekly models ranging from 77-89. That's the good news. The bad new is that on the basis of fundamental value the stock market is very high and overvalued. The S&P 500 is in the upper 3.5% of its range and the S&P dividend yield in the lower 4% of its range over the past 18 years. There have only been five times since 1950 that the S&P 500 dividend yield has been below its current level of 3.08%. In all 5 cases the stock market declined a short time thereafter. The S&P 500 P. E. ratio has climbed to 20.2, and there have only been four times that the S&P 500 has been bid-up to such a level since 1950. In addition to the dividend yield and the P.E. ratio, our 5 other measure of valuation also suggest that the market is considerably overvalued. To make matters worse, 3rd qtr. earnings are expected to be down almost 8% from a year ago. As a result, when Standard and Poors updates the 500 earnings, the S&P P.E. ratio could jump another .4 to 20.5+. The new high performance Multi-Factor stock market model (p. 16) remains very bearish because of the extreme level of market valuation. The only justification in our minds for the high level of the stock market is the belief that earnings will improve sharply during 1992 as we go to the next presidential election. While Bush will do everything in his power to stimulate the economy, his effort will be thwarted to some degree due to the "borrowing hangover" from the 1980s. A slow growth economy of 3% (or less) is not going to help firms increase their prices and earnings.

MARKET COMMENTARY, **Stock Market Project, School of Management, Georgia Institute of Technology November 18, 1991 by Professor Fred Allvine**

Model Results

1. Valuation Models *Unchanged And Negative*: A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Dividend/T-Bill Model Is Positive (we discount its validity). 2 Trend Following Technical Models: Positive But Decreasing. (pp.1-8).
2. Longer Term Liquidity Models Improved Last Week And Are Fairly Strong. Daily Models Range From 81-92 (p.9) & 4 Of 5 Weekly Models Range From 80-92.
3. 4 Of The 5 Weekly Portfolio Strategies Recommend Having From 80-90% Of Maximum Equity Holdings. Daily Portfolio Strategies Recommend 100% Of Maximum Commitment To Equities (pp. 12 & 14).
4. Reserve Models Continue To Improve. 4 Reserve Models Range From 50-81 (pp. 13, 16, 17). There Is An Adequate Supply Of Reserves For Banks To Lend If Justified By Loan Applications.
5. Bond Index (p.8) & Raw Material "A" (p.9) Have Stabilized & Are Fairly Strong. Raw Material "B" Has Bottomed (p.10). *New Combo Index* (aver. of Bond & R.M. A &B) Is Neutral To Slightly Positive (p.11).
6. Divergence Models Have Become Strong, But We Are Skeptical As Explained Below (pp. S13,a,b).
7. New Multi-Factor Bond Model: Recent Buy Signal (3rd in series). Earlier Buy Signals Still In Effect (p. 2-6). Bond Model Predicts A High Return Over Next 13 Weeks. Other Bond Model (shown in relation to D.J. Bond Index) Also Remains Strong (p. 7).
8. New Multi-Factor Stock Model. High Performance Model Gave Sell Signal 6 Wks Ago (p. 1).

Divergence Model Strong, But We Are Skeptical. Short Term Outlook Quite Volatile. S&P Remains Overvalued On Several Measures. A Significant Correction May Be In Making. Longer Term Moving Towards Pres. Elect. Slightly Bullish, But Considerable Uncertainty.

Conflicting Signals

We frankly believe that this is a particularly treacherous time for money managers for there are clearly conflicting signs regarding the attractiveness of stocks. As explained above, the monetary models (built from interest rates, money supply, and reserves) are very strong. Over the past twenty five years there has been a strong correlation between our monetary models and the movement of stock prices. The reason for this is quite simple. When the Federal Reserve has tightened to fight recessions, interest rates have increased and stock prices have typically declined. Another reason for this relationship is that as the Fed tightens, the return from bonds increases for a period of time relative to stocks. The contradictory evidence is that the market is quite overvalued with the S&P 500 P.E. ratio of 22 only being exceeded twice since 1950 - the last time was in the summer of 87 (other late 1950s). *The primary justification for such a high P.E. is the expectation that the economy and stock market will bounce back in 1992 and 1993 and the tattered earnings will be greatly improved.*

A bedeviling question by a research assistant!. One of my best research assistants over the years was a Presidential Fellow at Georgia Tech (a scholarship given to a select group of students at G.T.). This assistant repeatedly called to my attention that there was one period during which falling rates were very bad for the stock market. This was during the 1929 Crash when interest rates fell for a long period of time and so did the stock market during its worst performance in history. Lower rates simply could not turn around the economy during the go-go 20s when financial excesses abounded.

Yes, the theme of excesses during the 1920s has some parallels to the present time and conditions. The financial excesses during the go-go 1980s leave us with an economy that is experiencing some deep financial problems. The "beggar thy neighbor" policy of the Japanese has also hurt our economy and the world economy. Any careful examination of the data like we have been doing for our book WAKE UP AMERICA, YOUR ECONOMY IS BURNING reveals the borrowing excesses of the 1980s by the general public (personal borrowing up from 80% of personal income in 1980 to 97% in 1990) and the borrowing by Federal, state, and local governments is legendary. What the excessive borrowing of the 1980s did was to shift future consumption (that of the 1990s) back to the 1980s (borrowing created the longest economic expansion since WWII). While the expansion of the 1980s felt good, it left us with a host of economic and financial problems that now have to be dealt with. The 'borrowed-out' economy is very lethargic (has not responded to 5 cuts of the discount rate and more of the Fed Funds). History will soon determine whether we were able to 'jump-start' the economy. Over the weekend the evening news reported that unemployment has been under reported by 600,000 people during the 1st quarter bringing the total level of unemployment to 2 million persons - a sign that the recession is worse than originally thought. If the recession did not end in June and the economy experiences a double-dip, then this recession could equal or exceed the 18 months of the prior 2 energy recessions of 73-75 and 81-82 (the 2 worst recessions since WWII). In both of those case the stock market was devastated, while recently several of the stock market indexes made new highs. We do not believe the pieces fit together at this time to support such a high stock market. In last weeks' report, and in the daily reports, we warned that the stock market was in our opinion 'dangerously' high. We hope we are wrong.

Multi-Factor (M.F.) Stock Model Bearish, While M.F. Bond Model Bullish

Over the past two months we have introduced the new multi-factor bond and stock models. The major feature of the new stock model is that it incorporates both Liquidity and Valuation. This high performance model gave its 10th sell signal since 1975 6 weeks ago at the prior market high (personally believe it could be more). At that time the model was predicting a 7% decline in the S&P 500 sometime over the next 13 weeks. This week the stock model is predicting a 2.4% decrease in the stock market over the next 13 weeks. In contrast, the new high performance multi-factor Bond Model is forecasting an increase in long term government bond prices of 9% sometime over the next 13 weeks (our other Dow Jones Bond model is also strong). In conclusion, the risk reward relationship seems to strongly favor bonds over stocks.

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Georgia Institute of Technology November 25, 1991 by Professor Fred Allvine

Model Results

1. Valuation Models A-E All Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Market Yield vs. Debt). Dividend/T-Bill Model Is Positive (we discount its validity given importance of short term interest rates). 2 Trend Following Technical Models: In Downturn, But Slightly Positive - Another Bad Week For Stock Market Could Make Them Negative. (pp.1-8).
2. Longer Term Liquidity Models Improved Last Week And Are Fairly Strong. Daily Models Range From 82-94 (p.9) & 4 Of 5 Weekly Models Range From 60-93. However, Believe Positive Liquidity Models Are Offset By Poor Fundamentals.
3. 4 Of The 5 Weekly Portfolio Strategies Recommend Having From 80-90% Of Maximum Equity Holdings. Daily Portfolio Strategies Recommend 100% Of Maximum Commitment To Equities (pp. 12 & 14).
4. Reserve Models Continue To Improve. 4 Reserve Models Range From 60-85 (pp. 13, 16, 17). There Is An Adequate Supply Of Reserves For Banks To Lend If Justified By Strong Loan Applications.
5. Bond Index (p.7), Raw Material "A" (p.8), Raw Material "B" (p.9), and *New Combo Index* (aver. of Bond & R.M. A &B) Are Positive (p.10).
6. Divergence Models Have Become Strong, And Suggest The Possibility Of A Market Bounce. But We Are Skeptical About The Health Of The Stock Market (as explained below) (pp. S13,a,b).
7. New Multi-Factor Bond Model: Recent Buy Signal (3rd in series). Earlier Buy Signals Still In Effect (pp. 2-5). Bond Model Predicts A High Return Over Next 13 Weeks. Other Bond Model (shown in relation to D.J. Bond Index) Also Remains Strong (p. 6).
8. New Multi-Factor Stock Model: This High Performance Model (combines liquidity & value) Gave A Sell Signal 7 Wks. Ago (p. 1).

Divergence Model Strong, But We Are Skeptical. Short Term Outlook Quite Volatile. S&P Remains Overvalued On Several Measures. A Significant Correction May Be In Making. Next 12 Months Moving Towards Presidential Election Changed From Slightly Bullish To Highly Uncertain And Likely Negative.

Bears Are Roaming: And With Good Reason

With the sharp sell-off the stock market the past 6 days the news is full of the Bear Case, and we believe that the outlook for the market is in fact treacherous. The primary reason for throwing in with the Bears is that our forecast of the performance of the economy is bleak during at least the first half of the 1990s. We certainly could be wrong and hope that we are (Grandville and Prechter have been wrong in their long term bear market calls), but our honest appraisal of the first half of the 1990s is quite bleak. The Cover this weak summarizes why we are so bearish. Our outlook for earnings is quite different from most analysts who see earnings sharply improving during the Presidential Election year 1992. We have long written about the Pres. Election Cycle and the very strong tendency for the economy to improve and the stock market to advance over the two years before the P.E. (we too have been slightly bullish because of this tendency, but are having increasing reservations).

Why Our Negativeness? As summarized on the Cover of the report, we believe that the downward trend in earnings is not over and that the high P.E. multiple of the various stock indices is unwarranted. The high multiples are based upon a turnaround in the economy moving into the P.E. year that is expected to give earnings a boost. While there is a possibility of the economy being rescued going into 1992, there is in our opinion a greater likelihood of a very lethargic economy. In yesterday's issue of the Atlanta Journal & Constitution there was a lengthy article by Bill Hendrick entitled "Forecasters see a nation in depression". The 3 Bears in this article were S. Jay Levy (highly regarded forecaster), Albert Sindlinger (pollster), and Moncure G. Crowder (economist for Wachovia Bank of Ga.). Most of the article focused on the reasoning of Levy who believes, much as I do, that we lived far beyond our means during the 1980s. He feels that as a result of unwarranted borrowing we have shifted consumption from the 1990s back to the 1980s (our position as well). As a consequence, he forecasts very slow growth of 1 percent a year on average over the 1990s. Since it takes 2 percent GNP growth to keep unemployment from growing, Levy expects that unemployment will gradually increase to 10% over the 90s. Last week's issue of Business Week presented some startling data that showed that the standard of living was constant to declining for most American families from 1977 to 1991(quite different from the sharp improvement in the standard of living from 45-76) and Levy forecasts that this trend is likely to continue through much of the 1990s. Such bleak reality can not be good for the economy since consumers account for two thirds of GNP. Finally, we are of the opinion (see Cover) that the earnings growth from late 87 to 89 was bought by excessive borrowing (shifting consumption from future to present), and hence there will be little improvement in earnings for the foreseeable future. As stated in the past, we believe there has to a penalty for the excesses of the 1980s (over borrowing and building of fixtures, bloated government budgets, low savings and diminished competitiveness).

"Pushing On A String"

We believe that many forecasters like the Zweigs and Gazarellis are putting too much emphasis on "monetary models" that are flashing buy signals. Our "liquidity models" constructed from interest rates and reserve are very strong (see above) as the Fed pushes rates lower trying to jump start the economy. Furthermore, we foresee the possibility of rates being lowered again if the economy doesn't budge. While lower rates have historically worked to get the economy moving, we believe that there is a good chance that it will not happen this time since the economy is borrowed out. Unfortunately, the fiscal tool of increased government spending is no longer viable due to the "guns and butter policy" of President Reagan during the 1980s that racked-up huge Federal deficits that persist to the present. Reagan's tax cut was suppose to increase savings and investment to improve productivity, but the opposite happened (now President Bush originally called Reagan's plan voodoo economics).

Valuation Considered

I was recently asked by a sponsor why we have started our report for the last several months with a discussion of Valuation. The reason for doing this is that at times the market becomes undervalued and normally presents a good environment for buying stocks. Conversely, when the market becomes overvalued on a fundamental basis it is a bad environment for buying and holding stocks. Over the past 7 months our view of valuation has shifted from being fully valued, to overvalued, to dangerously overvalued (daily reports 2 weeks ago when S&P made a new high). A few weeks ago we introduced a new high performance mult-factor stock model that includes both liquidity and valuation components, and it gave a sell signal 7 weeks ago (10th sell signal since 1975). Presently, the stock model is back to neutral after being quite negative. If our view of constant to sliding earning is correct, the model will continue to be bearish. In contrast to the negative stock model, our bond models are quite strong (see pp 2-6).

MARKET COMMENTARY, **Stock Market Project, School of Management, Georgia Institute of Technology December 2, 1991 by Professor Fred Allvine**

Model Results

1. Valuation Models A-E Remain Negative (Market Letters, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & Stock Yield vs. Debt). New Multi-Factor Stock Model (which incorporates valuation) Remains In A Sell Mode (next page). 2 Trend Following Technical Models Have Sharply Deteriorated But Remain Slightly Positive. Dividend/T-Bill Model Is Positive (we discount validity). pp.1-8.
2. Longer Term Liquidity Models Remain Fairly Strong. Daily Models Range From 79-94 And 5 Weekly Models Range From 66-93 - pp 9&13. However, Believe Positive Liquidity Models Are Offset By Poor Valuation.
3. 4 Of The 5 Weekly Portfolio Strategies Recommend Having From 80-90% Of Maximum Equity Holdings. Daily Portfolio Strategies Recommend 100% Of Maximum Commitment To Equities (pp. 12 & 14). Strength Again Due To Strong Liquidity Models.
4. Reserve Models Continue To Improve. 4 Weekly Reserve Models Range From 55-82 (pp. 13, 16, 17). Banks Have Reserves To Lend - Problem Is Poor Loan Applications.
5. Bond Index (p.7), Raw Material "A" (p.8), Raw Material "B" (p.9), and *New Combo Index* (aver. of Bond & R.M. A &B) Are Positive (p.10). Combination Is An 84 On A 100 Point Scale.
6. Divergence Models Remain Strong, And Suggest The Possibility Of A Market Rally. However, We Are Skeptical Since Market Is Overvalued And Upward Momentum Has Been Broken (pp. S13,a,b).
7. New Multi-Factor Bond Model: Continues In A Buy Mode. Bond Model Predicts A High Return Over Next 13 Weeks. Other Bond Model (shown in relation to D.J. Bond Index) Also Remains Strong (p. 6).
8. New Multi-Factor Stock Model: High Performance Model (combines liquidity & valuation) Gave A Sell Signal 8 Wks. Ago Which Is Still In Effect (p. 1). Predicts Maximum 1.5% Gain In Stocks Over Next 13 Weeks.

Divergence Model Strong. Market Could Rally, But We Are Skeptical. Expect High Volatility. S&P Remains Overvalued On Several Measures. Sharp Market Correction Could Continue. Next 12 Months Moving Towards Presidential Election Changed From Slightly Bullish To Highly Uncertain And Likely Negative. Could Be Down As Case For 83 To 84 & 87 To 88.

Are Things Really Different?

The Outlook for the Stock Market based simply on our liquidity models (constructed from interest rates and reserves) is actually quite strong - 10 of our 13 daily and weekly models range from 79 to 96 on a 100 point scale. The stock markets normally advance when the liquidity models are as strong. However, we believe that *things are different* this time, and that the strong liquidity models could be misleading. We are of the opinion that the poor Valuation Models (those sighted above plus the high P.E. ratio and low dividend yield) largely offset the strong liquidity models. The reason the liquidity are strong is because the economy is so weak. The Fed keeps driving down rates hoping that lowering borrowing costs will increase consumer expenditures on housing and durable goods and contribute to increased investment by business. The economy may eventually respond to the traditional stimulus of lower interest rates, but the economy is very lethargic due to the borrowing excesses during the 1980s. The borrowing excesses actually shifted consumption from the 1990s back to the 1980s, and that is why we believe that economic growth could be quite slow during the 1990s. The Federal Reserve is confronted with a problem likened to "pushing on a string". It can provide the liquidity, but will businesses and consumers borrow and banks and financial institutions lend.

Earnings Growth In Doubt

Businesses are going to find it difficult to pass through the cost increases needed to significantly improve their earnings if the economy remains sluggish and only grows at 2-3 percent during the election year 1992. Year over year earning of the S&P 500 are now slightly below $18. The stock market optimists (i.e. the bulls) justify the high multiples they are paying for earning on forecasts that earnings will grow to $24 to $27 (up 40-50%) for all of 1992. Unless the lower rates take hold and start stimulating the economy (which is not certain), is unlikely that earnings will grow any where near as fast as the projections suggest .

Real Return Too High

Our studies suggest that one of the problems contributing to the outlook for slow economic growth is that the Real Return of Long Term Borrowing is too high. Real return is defined as the difference between the the 30 year T-Bond yield and the inflation rate. The Cover (also pp. 11&12 - 1st section) shows that from 1950-1980 that the Real Return averaged 2.5 percent. However, as borrowing increased from 130% of GNP from 1965-1980 to 195% of GNP by the end of the 1980s, the credit worthiness of the U.S. fell (reason for higher premium). As the Cover suggests, the borrowing was good for the economy and stock market during the 1980s, but is detrimental to the economy in the 1990s. If the economy slows and borrowing is low, then the real return from bonds could decrease from present level of near 5% to 2.5%. Assuming the CPI during 1992 is 4 percent (near the core rate) and the real return falls to 2.5%, then bonds could continue to rally (our expectation).

***MARKET COMMENTARY*, Stock Market Project, School of Management, Georgia Institute of Technology December 9, 1991 by Professor Fred Allvine**

Model Results

1. Valuation Models A-E (pp 1-5): 3 Negative And 2 Neutral (*Market Letters*, Insiders' Buying, Inflation Adjusted Market Return, Market Return vs. Debt, & *Stock Yield vs. Debt*). (Improving Valuation Models Indicated By Italics.) Dividend/T-Bill Model Is Positive (p. 6 we discount validity). New Multi-Factor Stock Model Which Incorporates Valuation In A Sell Mode (next page). **Overall, Valuation Models Are Negative Having Improved Slightly** As Stocks Prices Have Fallen And Interest Rates Have Continued To Decline.
2. Trend Following Technical Models Have Sharply Deteriorated Last Few Weeks. "The Trend Is Your Friend" And It's Getting Weak. **1st Trend Model Almost Gave A Sell Signal** (p. 7) **& 2nd One Did** (p. 8).
3. Longer Term Liquidity Models Remain Quite Strong. Daily Models From 80-95 And 5 Weekly Models Range From 71-95 - pp 9&13. Believe Strong Liquidity Models Are Offset By Poor Technical & Valuation Models.
4. 4 Of 5 Weekly Portfolio Strategies Recommend Having From 80-90% Of Maximum Equity Holdings. Daily Portfolio Strategies Recommend 100% Of Maximum Commitment To Equities (pp. 12 & 14). Strength Again Due To Strong Liquidity Models Which We Believe Have To Be Discounted As Chart Comments Indicate.
5. Reserve Models Continue To Improve. 4 Weekly Reserve Models Range From 57-91 (pp. 13, 16, 17). Banks Have Reserves To Lend - Problem Is Poor Loan Applications And Poor Bank Balance Sheets.
6. Bond Index (p.7), Raw Material "A" (p.8), Raw Material "B" (p.9), and *New Combo Index* (aver. of Bond & R.M. A &B) Are Very Positive (p.10). Combination Is A Strong 87 (on a 100 point scale) And Improving.
7. Divergence Models Remain Fairly Strong, And Suggest The Possibility Of A Market Rally. However, We Are Skeptical Since Market Is Overvalued And Upward Momentum Has Been Broken (pp. S13,a,b).
8. New Multi-Factor Bond Model: Continues In A Buy Mode (pp 2-6). Bond Model Predicts A High Return Over Next 13 Weeks. Other Bond Model (shown in relation to D.J. Bond Index) Also Remains Strong (p. 6).
9. New Multi-Factor Stock Model: High Performance Model (combines liquidity & valuation) Gave A Sell Signal 9 Wks. Ago Which Is Still In Effect (p. 1). Predicts Maximum 2.9% Gain In Stocks Over Next 13 Weeks.

Short Term Outlook: Divergence Model Strong & Stocks Could Rally, But We Are Skeptical. S&P Remains Overvalued On Several Measures. Sharp Market Correction Could Continue. Next 12 Months Moving Towards Presidential Election Changed From Slightly Bullish To Highly Uncertain And Likely Negative. Could Be Down As Case For 83 To 84 & 87 To 88.

Will Lower Rates Revitalize Economy?

Historically the economy (and in turn the stock market) has responded favorably to lower interest rates since this typically means that the Federal Reserve is rebuilding liquidity to give a boost to the economy. The Fed Funds rate has been cut 14 times since the recession began in July 1990, but the economy has yet to respond. The problem in economic terms is likened "to pushing on a string". The Fed can provide the liquidity, but if the economic system is "borrowed out" then lower rates fell to work (or are slow to have an impact), and that has been the problem to date. We have studied a large number of time series for our forthcoming book on our "weakened economy", and many suggest that we pushed the economy too hard in the 1980s. The large real increase in borrowing during the 1980s shifted consumption backward from the 1990s. As a consequence government, business, and consumers are trying to repair their tattered financial conditions, and this means very slow growth which is going to hurt earnings.

Technical Models Negative

We have been warning since the 2nd quarter of 1991 that the S&P 500 was becoming more overvalued after having increased 25% over the prior six months. Two reasons that this has happened include: 1. may forecasters were expecting the stock market to increase by 50-80 percent from the recession low as has often been the case in the past (however, the large gains occurred when the P.E. fell to half of the level of this recession - 7 vs. 14) and 2. many stock market analyst were relying on the historical relationship between improved liquidity and rising stock prices (the relationship which we believe is breaking down). As we have reported for quite some time, while the Liquidity Models are very strong the Valuation Models (5 we run plus level of S&P 500 P.E. and S&P dividend) are quite weak. The reason for this discrepancy is that the Fed has not succeeded (and may not) in jump-starting the economy through the traditional medicine of lower rates. Over the last few weeks our two Technical Models (built for highs and lows and advances and declines) have sharply deteriorated (pp 7&8). The first technical model (constructed from highs and lows) almost gave a sell signal this week, and the second one constructed from advances and declines did. While the Technical Models could reverse themselves and improve, they often decline and give a sell signal after a major advance in the stock market like we had over the 14 months from Oct. 90 - Nov. 91. I believe that what we are now experiencing is the end of the long bull market that started in August 1982. The poor outlook for the economy and the weakened state of the consumer, business, and government does not provide the setting for the stock market to continue to advance.

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Model Results

1. 2 Psychological Models (pp 1-1): 1 Somewhat Positive (Market Letters) And Other Very Negative (Insiders)
2. 4 Valuation Models [pp 3-6]: 2 Which Compare Market Return To Other Variables Are Quite Negative (Inflation Adjusted Market Return & Market Return vs. Debt) and 2 Based On Dividend Yield Are Somewhat (*Stock Yield vs. Debt*) To Very Positive (Dividend/T-Bill Model Is Positive - we discount validity).

1&2. Summary: 6 Psychological & Valuation Models Are Evenly Split (3+ & 3-). In General Positive Factors Are Those Associated With Lower Short Term Rates And Negative Ones Due To High P.E. Ratio (see our reasoning for negative view of S&P Earnings Outlook) [p 15 - sect. 1].

3. Trend Following Technical Models: 1st Trend Model Gave Sell Signal This Week (p. 7) & 2nd One Gave Sell Signal Last Week (p. 8). If "trend is supposed to be your friend" then it is now negative.
4. Longer Term Liquidity Models Remain Quite Strong. Daily Models From 84-95 & 5 Weekly Models Range From 74-96 - [pp 9&13]. Strong Liquidity Models Are To A Degree Offset By Poor Technical & Valuation.
5. 4 Of 5 Weekly Portfolio Strategies Recommend Having From 80-90% Of Maximum Equity Holdings. Daily Portfolio Strategies Recommend 100% Of Maximum Commitment To Equities (pp. 12 & 14). Strength Again Due To Strong Liquidity Models Which We Feel Need To Be Discounted To A Degree (see chart comments).
6. Reserve Models Continue To Improve. 4 Weekly Reserve Models Range From 64-92 (pp. 13, 16, 17). Banks Have Plenty Of Liquidity - Problem Is Their Poor Financial Conditions And Weak Loan Applications.

6. Bond Index (p.7), Raw Material "A" (p.8), Raw Material "B" (p.9), and *New Combo Index* (aver. of Bond & R.M. A &B) Quite Strong (p.10). Combination Is A Strong 86 (on a 100 point scale) And Improving.

7. Divergence Models Remain Fairly Strong, And Suggest The Possibility Of A Market Rally (which happened last week). However, We Believe Upward Moves Will Be Small Since S&P 500 P.E. Ratio So High & Dividend So Low (pp. S13,a,b).
8. New Multi-Factor Stock Model: High Performance Model (combines liquidity & valuation) Gave A Sell Signal 10 Wks. Ago Which Is Still In Effect (p. 1). Predicts Maximum 3% Gain In Stocks Over Next 13 Weeks.
9. New Multi-Factor Bond Model: Continues Quite Strong (pp 2-5). Bond Model Predicts A High Return Over Next 13 Weeks. Other Bond Model (shown in relation to D.J. Bond Index) Also Remains Strong (p. 6).

Short Term Outlook: Divergence Model Strong & Stocks Could Rally, But Gains Likely Small. Important Valuation & Trend Models Negative Suggesting Stock Market Could Be Volatile. Next 12 Months Moving Towards Presidential Election Changed From Slightly Bullish To Highly Uncertain And Likely Negative. Could Be Down Like Case For 83 To 84 & 87 To 88.

Interest Rates Likely To Go Lower

Signs still suggest that economy remains very sluggish. As a result, Federal Reserve could cut the Discount Rate again in the near future - will pull all stops to try and jump start economy going into Presidential Election year 1992. The primary reason for the slow economic recovery in our opinion (assuming we do not have a double dip with recession continuing) is the financial excesses of the 1980s. The increase in borrowing by government (Federal, state, & local), consumers, and business all contribute to a "borrowed-out economy". What we have done is to shift consumption (through borrowing) to the 1980s from the 1990s. As a consequence growth is likely to be relatively slow during the 1990s (2 percent or less). When consider payment of interest to foreigners, the standard of living should continue to contract during 1990s (as it has done since late 1970s). This is not an environment (given already high level of valuation - S&P only contracted to 14+ P.E. in this recession vs. 7+ P.E. during three prior recessions) in which one would expect the stock market to be regularly jumping to new highs.

Is Falling CRB Good For Stocks Or Bonds?

The CRB Index is near a 15 year low, and we decided to examine the record to see whether this is good for stocks and/or bonds. The first chart (p. 11 sect. 1) suggests that a rising CRB Index was good for the stock market from 1977 -1982. However, from 1984 to the present the reverse has been the case with a falling CRB Index normally contributing to a rising stock market. We next examined the relationship between a falling CRB Index and the Dow Jones Bond Index and the 30 year Treasury Bond Yield (pp. 12&13 sect. 1). These charts show that a falling CRB Index is generally quite favorable to bond prices and falling interest rates. The final chart shows the decade by decade change in the 30 yr. Treasury Bond Yield (past 27 yrs). Since late summer 1987, the 30 yr. Bond Yield has been trending lower and is likely to continue to do so if the economy continues to grow slowly. At the present the bond premium over the CPI is close to 4.7 percent. If the economy remains slow, then this premium is likely to fall which could send the yield done to 6%+ which

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Model Results

1. 2 Psychological Models (pp 1-2): 1 Somewhat Positive (Market Letters) And Other Very Negative (Insiders)
2. 4 Valuation Models [pp 3-6]: 2 Which Compare Market Return To Other Variables Are Quite Negative (Inflation Adjusted Market Return & Market Return vs. Debt) and 2 Based On Dividend Yield Are More Positive (*Stock Yield vs. Debt*) To Very Positive (Dividend/T-Bill Model Is Positive - we discount validity).

1&2. Summary: 6 Psychological & Valuation Models Are Evenly Split (3+ & 3-). In General Positive Factors Are Those Associated With Lower Short Term Rates And Negative Ones Due To High P.E. Ratio.

3. Trend Following Technical Models: Both Trend Following Models Became Negative Over The Past 2-3 Weeks (pp. 7&8). If "trend is your friend", then it is now negative". We Believe Downturn In Trend Is Quite Significant. While It Could Reverse Itself And Market Advance To New Highs, The Uncertainty For The Economy And Outlook For Earnings Put Odds At On The Negative Side Of This Happening.
4. Longer Term Liquidity Models Even Stronger Than Last Week. Daily Models From 86-95 & 5 Weekly Models Range From 77-97 - [pp 9&13]. Strong Liquidity Models Are To A Degree Offset By Poor Technical & Valuation Models.
5. 4 Of 5 Weekly Portfolio Strategies Recommend Having From 80-90% Of Maximum Equity Holdings. Daily Portfolio Strategies Recommend 100% Of Maximum Commitment To Equities (pp. 12 & 14). Strength Again Due To Strong Liquidity Models Which We Feel Need To Be Discounted To A Degree (see chart comments).
6. Reserve Models Continue To Improve. 2 Weekly Reserve Models Above 80 And Other 2 Models Close To 60 (pp. 13, 16, 17). Banks Have Have Reserves - Problem Is Their Poor Financial Conditions And Weak Loan Applications.
6. Bond Index (p.7), Raw Material "A" (p.8), Raw Material "B" (p.9), and *New Combo Index* (aver. of Bond & R.M. A &B) All Improving And Quite Strong (p.10). Combination Is A Strong 87 (on a 100 point scale) And Improving.
7. Divergence Models Remain Fairly Strong, And Suggest The Possibility Of A Market Rally (which happened last 2 weeks). However, We Believe Upward Moves Will Be Small Since S&P 500 P.E. Ratio So High & Dividend So Low.
8. New Multi-Factor Stock Model: High Performance Model (combines liquidity & valuation) Gave A Sell Signal 11 Wks. Ago Which Is Still In Effect (p. 1). Predicts Maximum 3.5% Gain In Stocks Over Next 13 Weeks.
9. New Multi-Factor Bond Model: Continues Quite Strong (pp 2-5). Bond Model Predicts A High Return Over Next 13 Weeks. Other Bond Model (shown in relation to D.J. Bond Index) Also Remains Strong (p. 6). We Believe That On Balance The Return From Bonds Should Be More Attractive Than Stocks. This Conclusion Is Based On The Belief That The Economy Is Likely To Remain Weak. However, Should The Drastic Move By The Federal Reserves Of Cutting The Discount Rate By A Full Point At The Open Of The Market On Friday Work And Stimulate The Economy, Then Stock Attractiveness Would Increase Relative To Bonds.

Short Term Outlook: Divergence Model Strong & Stocks Could Rally, But Gains Likely Small. Important Valuation & Trend Models Negative Suggesting Stock Market Could Be Volatile. Next 12 Months Moving Towards Presidential Election Changed From Slightly Bullish To Highly Uncertain And Likely Negative. Could Be Down Like Case For 83 To 84 & 87 To 88.

Fed Does All It Can To Stimulate Economy

The economic news last week was very poor with new weekly unemployment numbers rising to nearly 500,000 people. General Motors announcement of a a reduction of 75,000 employees over the next few years added a further chill to the economy. Stock market was in a very precarious position with the poor economic outlook. The Federal Reserve pulled all its stops to see if they could do something to stimulate the economy. As I have repeated discussed, our studies suggest that the U.S. economy is seriously crippled due to the excessive borrowing during the 1980s that shifted consumption back to the 80s from the 90s. As a consequence, we believe the economic outlook for the 1990s is rather bleak, and at the best expect very slow growth with a relatively high level of unemployment.

We hope that the Fed action of cutting the discount rate by a full point and taking it down to the level of the early 1960s and late 1950s does in fact stimulate the economy. On the positive side, it does lower borrowing costs, however, on the negative side it will for a while reduce income through driving down money market funds and other short term rates that older people rely upon.

(repeated from last weeks report)

Interest Rates Likely To Go Lower

Signs still suggest that economy remains very sluggish. As a result, Federal Reserve could cut the Discount Rate again in the near future - will pull all stops to try and jump start economy going into Presidential Election year 1992. The primary reason for the slow economic recovery in our opinion (assuming we do not have a double dip with recession continuing) is the financial excesses of the 1980s. The increase in borrowing by government (Federal, state, & local), consumers, and business all contribute to a "borrowed-out economy". What we have done is to shift consumption (through borrowing) to the 1980s from the 1990s. As a consequence growth is likely to be relatively slow during the 1990s (2 percent or less). When consider payment of interest to foreigners, the standard of living should continue to contract during 1990s (as it has done since late 1970s). This is not an environment (given already high level of valuation - S&P only contracted to 14+ P.E. in this recession vs. 7+ P.E. during three prior recessions) in which one would expect the stock market to be regularly jumping to new highs.

(topic from last week's special report)

Is Falling CRB Good For Stocks Or Bonds?

Answer: At Times It Is Good For Stocks And At Other Times Bad. However, A Closer Correlation Exists Between Falling CRB And Fall Interest Rates And Rising Bond Price.

We believe that as long as the CRB continues to decline that it will be positive for bonds, however, negative for stocks. A falling CRB means a very slow world economy and will make it difficult for firms to pass on price increases and to improve earnings.

Watch-out for Japan, it could be in trouble with it trading neighbors and its stock and real estate markets could be hurt.

**Wishing You A Happy Holiday
And A Healthy And A Prosperous
New Year!**

Due to vacation this week, the short term section of the report is not produced (will be next week). The critical first and third sections of the report are produced.

Our objective for early next year is to introduce a systematic procedure for enhancing market return which we believe will be an important addition to the package. The enhancing tools can be used to better time long term commitments to the stock market, and to adjust market exposure to improve short term return.

MARKET COMMENTARY, Stock Market Project, School of Management, Georgia Institute of Technology December 30, 1991 by Professor Fred Allvine

Model Results

1. 2 Psychological Models (pp 1-2): 1. Market Letters Positive. 2. Insiders Very Negative.
2. 4 Valuation Models [pp 3-6]: 2 Comparing Market Return To Other Variables Remain Quite Negative (Inflation Adjusted Market Return & Market Return vs. Debt). 2 Based On Dividend Yield Comparison Are Positive (*Stock Yield vs. Debt*) To Very Positive (Dividend/T-Bill Model Is Positive - we discount validity).

1&2. Summary: 6 Psychological & Valuation Models Are Evenly Split (3+ & 3-). In General Positive Factors Are Those Associated With Lower Short Term Rates And Negative Ones Due To High P.E. Ratio.

3. Trend Following Technical Models: Both Trend Following Models Became Negative Over The Past 3-4 Weeks (pp. 7&8). If "trend is your friend", then it is now negative - but less so. We Believe Downturn In Trend Is Quite Significant. Trend Could Turn-up If Stock Market Continues To Advance. However, As Explained In Write-up (below) We Expect Rally To Abort.
4. Longer Term Liquidity Models Even Stronger Than Last Week. Daily Models From 86-95 & 5 Weekly Models Range From 78-98 - [pp 9&13]. Strong Liquidity Models Are To A Degree Offset By Poor Technical & Valuation Models.
5. 4 Of 5 Weekly Portfolio Strategies Recommend Having From 80-90% Of Maximum Equity Holdings. Daily Portfolio Strategies Recommend 100% Of Maximum Commitment To Equities (pp. 12 & 14). Strength Again Due To Strong Liquidity Models Which We Feel Need To Be Discounted To A Degree (see chart comments).
6. Reserve Models Continue To Be Strong. Models Range From 59 to 91. Banks Have Reserves - Problem Is Their Poor Balance Sheets And Weak Quality Of Loan Applications.
6. Bond Index (p.7), Raw Material "A" (p.8), Raw Material "B" (p.9), and *New Combo Index* (aver. of Bond & R.M. A &B) All Improving And Quite Strong (p.10). *Combination Is A Strong 89 (on a 100 point scale) And Back To Strong Level Of 86 And First Half of 87.*
7. Divergence Models Were Right-On With Buy Signal Two Weeks Ago. Now Short Term Model (p. S13) Has Reversed Itself And Has Given A Sell Signal (pp. S13a-c).
8. New Multi-Factor Stock Model: High Performance Model (combines liquidity & valuation) Gave A Sell Signal 12 Wks. Ago Which Is Still In Effect (p. 1). Predicts Maximum 2.8% Gain In Stocks Over Next 13 Weeks.
9. New Multi-Factor Bond Model: Continues Quite Strong (pp 2-5). Bond Model Predicts A High Return Over Next 13 Weeks (around 10%). Other Bond Model (shown in relation to D.J. Bond Index) Also Remains Strong (p. 6). *We Believe That On Balance The Return From Bonds Should Be More Attractive Than Stocks.* This Conclusion Is Based On The Belief That The Economy Is Likely To Remain Weak. However, Should The Efforts By The Fed Succeed In Stimulating The Economy Then The Bond Rally Is Over.
10. Special Studies: S&P 500 P.E. And Dividend Yield From 1950 (weekly) To Present. **Both Analyses Suggest Market Is Dangerously High**. Obviously, If The Fed Strategy Works And Stimulates Economy (earnings improve), And We Move Into A Slow Growth / Low Inflationary Period, The Stock Market Might Warrant Such High Earnings Multiples and Low Dividend Rates. We Remain Skeptical About Economy And Earnings.

Short Term Outlook: Divergence Model Called The Upturn Two Weeks Ago. Now Negative. Important Valuation & Trend Models Negative Suggesting Stock Market Could Be Volatile. Next 12 Months Moving Towards Presidential Election Changed From Slightly Bullish To Highly Uncertain And Likely Negative. Could Be Down Like Case For 83 To 84 & 87 To 88.

Quite A Week, But Will It Hold?

The stock market exploded as many people in the financial world were vacationing. The factor that propelled stocks higher was the 6th cut in the discount rate on 12/20. As we have frequently discussed in special reports, a discount rate cut is normally a very positive development for the stock market. However, earlier cuts in a series sometimes give the stock market more of a charge than those coming later on. I goofed last week (I apologize) and in my hurry to catch an air plane I failed to included the cover from last week's report that gave an update on the meaning of a discount rate cut (see 3rd cover for this week's report). There is no question regarding the general positive nature of a sharp cut in the discount rate. However, we believe that one needs to take into account other factors which influence the stock market and not just interest rates.

Stock Market In Dangerous Territory

Our experience suggests that market tops are much harder to call than bottoms. Upturns are often sharp, while tops are rolling and at times defy logic. The stock market may work its way higher and hold the gains, but we remain skeptical. This week we updated our study of the S&P 500 Price Earnings Ratio. As can be observed from the first cover for the report, there have only been two week over the past 42 years when the P.E. ratio was higher, and this was before the 1987